East End and County Industrial

GREENHOUSE GAS ANALYSIS

CITY OF CHINO

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LIST OF ABBREVIATED TERMS

°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1181	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
APA	Administrative Procedure Act
AQIA	Air Quality Impact Analysis
BAU	Business As Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CALSTA	California State Transportation Agency
CALTRANS	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CAP	Climate Action Plan
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane
CFC	Chlorofluorocarbons
CH_4	Methane
CHF_3	Fluoroform
CH_2FCF	1,1,1,2-tetrafluoroethane

CH_3CF_2	1,1-difluoroethane
CITY	City of Chino
CNRA	California Natural Resources Agency
CNRA 2009	2009 California Climate Adaptation Strategy
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nation's Framework Convention on Climate Change
COP	Conference of the Parties
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DOF	Department of Finance
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
FBMSM	Facility-Based Mobile Source Measures
FED	Functional Equivalent Document
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
GOBIZ	Governor's Office of Business and Economic Development
GPD	Gallons Per Day
GPY	Gallons Per Year
GWP	Global Warming Potential
H_2O	Water
HFC	Hydrofluorocarbons
HDT	Heavy-Duty Trucks
HHDT	Heavy-Heavy-Duty Trucks
hp	Horsepower
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks

LEV III	Low-Emission Vehicle
LHDT	Light-Heavy-Duty Trucks
MDV	Medium-Duty Vehicles
MHT	Medium-Duty Trucks
MHDT	Medium-Heavy-Duty Tucks
MMR	Mandatory Reporting Rule
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
MPG	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
MWELO	California Department of Water Resources' Model Water Efficient
MY	Model Year
N_20	Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO_X	Oxides of Nitrogen
Non-Annex I	Developing Nations
OAL	Office of Administrative Law
OPR	Office of Planning and Research
PFC	Perfluorocarbons
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	East End and County Industrial
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RV	Recreational Vehicle
SAR	Second Assessment Report
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies

SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
Sf	Square Feet
SF_6	Sulfur Hexaflouride
SGC	Strategic Growth Council
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
SWCRB	State Water Resources Control Board
TAZ	Traffic Analysis Zones
TIA	Traffic Impact Analysis
UNFCCC	United Nations' Framework Convention on Climate Change
UTR	Utility Tractors
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *East End and County Industrial Greenhouse Gas Analysis* is 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 potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: The Project would not generate direct or indirect greenhouse gas emission that would result in a significant impact on the environment.	3.8	*Less Than Significant*	*n/a*
GHG Impact #2: The Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	3.8	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)). Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10% less by 2020 (7).
- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).

- Renewable Portfolio Standards (SB 1078 – also referred to as RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020 (10).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations.

ES.2 CITY OF CHINO REGULATORY REQUIREMENTS

RR GHG-1

Mandatory Compliance with Municipal Code Chapter 15.45: In order to reduce air pollutant emissions, inclusive of GHG emissions, and promote sustainability through conservation of energy and other natural resources, the Project shall comply with applicable provisions of Chino Municipal Code Chapter 15.45 – Climate Action Plan Implementation. Development proposals within the Project site shall conform to Climate Action Plan Implementation Section 15.45.070 Option 1– "Exceed by 3% the mandatory California Energy Code Title 24, Part 6 standards, in effect at the time of development application submittal for discretionary review."

Verification of increased energy efficiencies shall be documented in Title 24 Compliance Reports provided by the Applicant and reviewed and approved by the City prior to the issuance of building permits.

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1 INTRODUCTION

This report presents the results of the greenhouse gas analysis (GHGA) prepared by Urban Crossroads, Inc., for the proposed East End and County Industrial (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed East End and County Industrial site is located on the northwest corner of East End Avenue and County Road, in the City of Chino, as shown on Exhibit 1-A. The Project site is currently occupied by existing structures on the southernly portion of the site. All existing structures and asphalt/concrete within the Project site will be demolished.

Existing land uses near the site include residential homes located east and south of the Project site, industrial facilities located to the north and south, and the Sunwest Tropical Nursey located adjacent to the Project's western border. State Route 60 (SR-60) is located approximately 105 feet south of the Project site.

1.2 PROJECT DESCRIPTION

The development of the proposed Project is to consist of 212,251 square feet of High-Cube Fulfillment Center Warehouse use (within Building 1) and 55,534 square feet of Industrial Park use (within Buildings 2-4), as shown on Exhibit 1-B. For the purposes of this analysis, the Project is proposed to be developed in a single phase with an anticipated Opening Year of 2021.

At the time this GHG analysis was prepared, the future tenants of the proposed Project were unknown. This GHG analysis is intended to describe impacts associated with the expected typical operational activities at the Project site.

Per the *East End and County Industrial Traffic Impact Analysis* (TIA) prepared by Urban Crossroads, Inc. the Project is expected to generate a total of approximately 642 two-way vehicular trips per day (321 inbound and 321 outbound) which includes 106 two-way truck trips per day (53 inbound and 53 outbound) (12). This GHG study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

EXHIBIT 1-A: LOCATION MAP

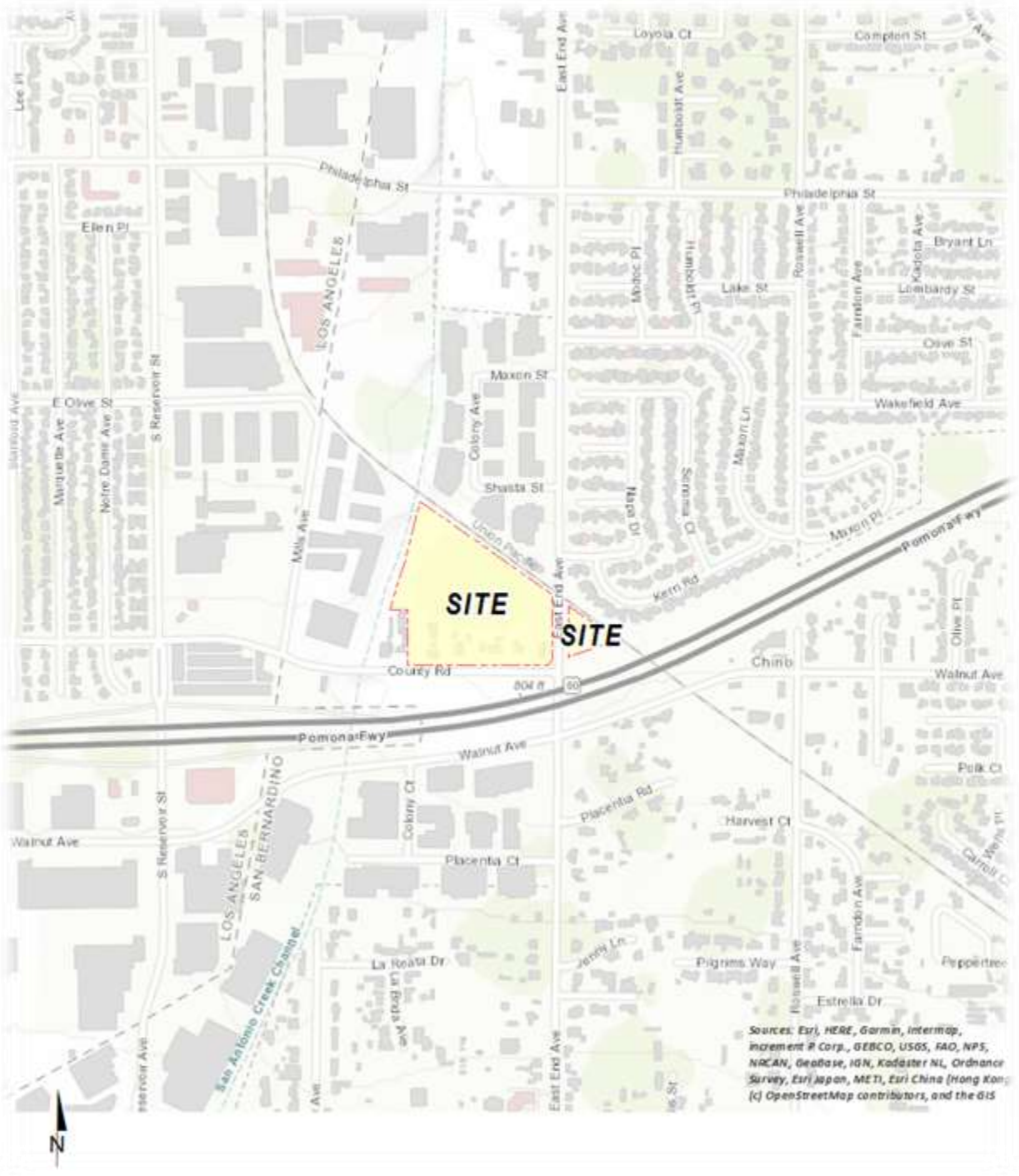


EXHIBIT 1-B: SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GREENHOUSE GASES

GREENHOUSE GASES AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-1 later in

this report) because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GREENHOUSE GASES

Greenhouse Gases	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive	The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Greenhouse Gases	Description	Sources	Health Effects
	feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (13).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (14).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (15).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (16).

Greenhouse Gases	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (17).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (18).

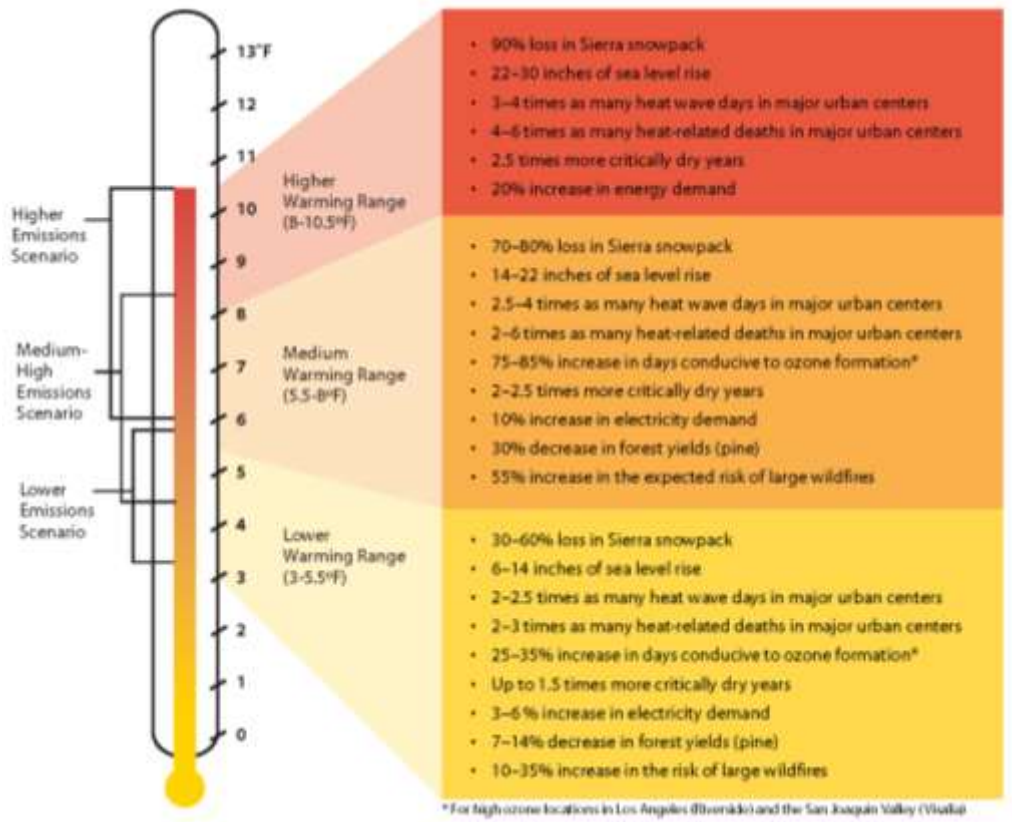
Greenhouse Gases	Description	Sources	Health Effects
		used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (18).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (19).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

Greenhouse Gases	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), fluoroform (CHF_3), 1,1,1,2-tetrafluoroethane (CH_2FCF), and 1,1-difluoroethane (CH_3CF_2). Prior to 1990, the only significant emissions were of CHF_3. CH_2FCF emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (20). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Greenhouse Gases	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (21).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (22).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (23). Exhibit 2-A presents the potential impacts of global warming (24).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the Second Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 5th Assessment Report range from 1 for CO_2 to 23,500 for SF_6 (25).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		Second Assessment Report	5th Assessment Report
CO_2	See*	1	1
CH_4	12 .4	21	28
N_2O	121	310	265
HFC-23	222	11,700	12,400
HFC-134a	13.4	1,300	1,300
HFC-152a	1.5	140	138
SF_6	3,200	23,900	23,500

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

2.5 GREENHOUSE GAS EMISSIONS INVENTORIES

Global

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2017. Based on the latest available data, the sum of these emissions totaled approximately 29,216,501 gigagram (Gg) CO_2e[1] (26) (27) as summarized on Table 2-3.

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2017 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014.

United States

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2017.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [2]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	11,911,710
United States	6,456,718
European Union (28-member countries)	4,323,163
India	3,079,810
Russian Federation	2,155,470
Japan	1,289,630
Total	**29,216,501**

State of California

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls, but is still a substantial contributor to the U.S. emissions inventory total (28). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 million metric tons of CO_2e ($MMTCO_2e$) per year (29).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures

[2] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while

range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC. In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nation's Framework Convention on Climate Change (Convention). On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

International Climate Change Treaties. The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of five percent against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 °C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;

- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (30).

On June 2, 2017 President Donald Trump announced his intention to withdraw from the Paris Agreement. It should be noted that under the terms of the agreement, the United Sates cannot formally announce its resignation until November 4, 2019. Subsequently, withdrawal would be effective one year after notification in 2020.

NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment. In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the Supreme Court found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (31).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles by the 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022-2025 GHG standards are not appropriate and should be revised (32). This Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022-2025 light-duty vehicles. On August 24, 2018, the EPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the CAA to establish more stringent standards (33).

Mandatory Reporting of GHGs. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future

policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output-based standard of 1,000 pounds of CO_2 per megawatt-hour, based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016 the U.S. Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards.

Cap-and-Trade. Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015.

SmartWay Program. The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (34):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs will have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10 percent or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the

tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

CALIFORNIA

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The CARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

CARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (35). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (36). At that level, a 28.4 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (37) .

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012 (38). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 $MMTCO_2e$ (AB 32 2020 target)
- 2000: 463 $MMTCO_2e$ (an average 8 percent reduction needed to achieve 1990 base)
- 2010: 450 $MMTCO_2e$ (an average 5 percent reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4 percent and the latest reduction from 2020 BAU is 21.7 percent.

- 2020: 545 $MMTCO_2e$ BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base)

CARB Scoping Plan. CARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (36). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS); and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The CARB approved the First Scoping Plan Update on May 22, 2014. The First Scoping Plan Update identifies the next steps for California's climate change strategy. The First Scoping Plan Update shows how California continues on its path to meet the near-term 2020 GHG limit, but

also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The First Scoping Plan Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The First Scoping Plan Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050 (38).

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. The CARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, CARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 motor vehicle GHG emission standards, and the LCFS. In addition, CARB factored into the 2020 BAU inventory emissions reductions associated with 33 percent RPS for electricity generation. The updated BAU estimate of 507 $MMTCO_2e$ by 2020 requires a reduction of 80 $MMTCO_2e$, or a 16 percent reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 $MMTCO_2e$) by 2020.

In order to provide a BAU reduction that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many CAPs, the updated inventory without regulations was also included in the Supplemental FED. The CARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated CARB 2020 BAU projection in the Supplemental FED is 545 $MMTCO_2e$. Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, CARB estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the approximate 28.4 percent BAU reduction previously reported under the original Climate Change Scoping Plan (36).

2017 Climate Change Scoping Plan Update

In November 2017, CARB released the Final 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The Final 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The Final 2017 Scoping Plan Update establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the Final 2017 Scoping Plan Update framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks.
- LCFS, with an increased stringency (18 percent by 2030).
- Implementing SB 350, which expands the RPS to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of zero-emission vehicles (ZEV) trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the 2017 Scoping Plan acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the Final 2017 Scoping Plan Update also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide

goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 $MTCO_2e$ per year, "indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (39) (40).

Senate Bill 32. On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (11).

Cap-and-Trade Program. The Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. See Title 17 of the CCR §§ 95800 to 96023). The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production)

commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25.000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program. Triggering of the 25.000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" (30) for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the First Update:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (CARB 2014)."*

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> *"The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as*

> *improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures* (38)*."*

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with VMT are covered by the Cap-and-Trade Program (41). In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the Program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.[3]

[3] On March 17, 2011, the San Francisco Superior Court issued a final decision in *Association of Irritated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of the CARB Scoping Plan for the implementation of AB 32, the Court enjoined CARB from further rulemaking under AB 32 until CARB amends its CEQA environmental review of the Scoping Plan to address the flaws identified by the Court. On May 23, 2011, CARB filed an appeal. On June 24, 2011, the Court of Appeal granted CARB's petition staying the trail court's order pending consideration of the appeal. In the interest of informed decision-making, on June 13, 2011, CARB released the

SB 375 – the Sustainable Communities and Climate Protection Act of 2008. Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

AB 1493. California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-

expanded alternatives analysis in a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document. The CARB Board approved the Scoping Plan and the CEQA document on August 24, 2011.

emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 350— Clean Energy and Pollution Reduction Act of 2015. In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order B-55-18 and SB 100. Executive Order B-55-18 and SB 100. SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25 percent of retail sales are required to be from renewable sources by December 31, 2016, 33 percent by December 31, 2020, 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030. SB 100 raises California's RPS requirement to 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07 – Low Carbon Fuel Standard. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, the CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. The CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015 the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy (CNRA 2009) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 CCR. CCR, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

Title 24 CCR. 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. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. It should be noted that the analysis herein

assumes compliance with the 2019 Title 24 Standards because the Project will be constructed after January 1, 2020.

The CEC indicates that the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent 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 about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades (42).

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 (BSC). CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that will be 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 percent 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. 2019 CALGreen standards are applicable to the Project and require (43):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phase project, such material may be stockpiled on site until the storage site is developed (5.408.3).

- Recycling by Occupants. 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 (5.410.1).
- 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 (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). 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 (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of note more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gal/day (5.303.1.1 and 5.303.1.2).
- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

MWELO. The MWELO was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected upon compliance with the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed Department of Water Resources (DWR) to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015 effective December 15,

2015. New development projects that include landscape areas of 500 sf or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems;
- Incentives for graywater usage;
- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Reporting requirements for local agencies.

CARB Refrigerant Management Program. CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

Tractor-Trailer GHG Regulation. The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

Phase I and 2 Heavy-Duty Vehicle GHG Standards. CARB has adopted a new regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the EPA adopted their new rule for HDTs and engines. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The

federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year HDT vehicles, including trailers. But as discussed above, the EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA.

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the CEQA Guidelines for implementing the CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 1506.4 was amended to state that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (44).

REGIONAL

The project is within the South Coast Air Basin (SCAB), which is under the jurisdiction of the SCAQMD.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and Commercial land use: 3,000 $MTCO_2e$ per year
    - Industrial land use: 10,000 $MTCO_2e$ per year
    - Based on land use type: residential: 3,500 $MTCO_2e$ per year; commercial: 1,400 $MTCO_2e$ per year; or mixed use: 3,000 $MTCO_2e$ per year
- Tier 4 has the following options:
    - Option 1: Reduce BAU emissions by a certain percentage; this percentage is currently undefined.
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$/SP/year for projects and 6.6 $MTCO_2e$/SP/year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

2.8 CITY OF CHINO

CLIMATE ACTION PLAN

The Chino Climate Action Plan (CAP) is implemented through Chino Municipal Code Chapter 15.45 – CAP Implementation. This Chapter provides specific voluntary and mandatory measures to reduce GHG emissions. The Chapter also provides specific performance standards for new development.

Under the CAP, the City of Chino selected a goal to reduce its community GHG emissions to a level that is 15 percent below its 2008 GHG emissions levels by 2020 consistent with AB 32 and recommended in the AB 32 Scoping Plan. In order to fulfill this commitment, GHG emissions-reducing development and performance standards have been established under the Chino CAP as codified in Chino Municipal Code Chapter 15.45 – CAP Implementation and are summarized as follows:

- Municipal Code Section 15.45.030 identifies specific development standards applicable to new residential development. In summary, new one-and two- family residential dwellings would be required to provide electrical systems capable of supporting future electric vehicle supply equipment (EVSE). All new residential development would be required to install ENERGY STAR appliances in instances where ENERGY STAR rated appliances are available. New residential construction would be required to divert or salvage at least 65 percent of non-hazardous construction and demolition debris generated at the site.
- Municipal Code Section 15.45.040 identifies specific development standards applicable to new non-residential development. In summary, new non-residential development would be required to install ENERGY STAR appliances in instances where ENERGY STAR rated appliances are available. New non-residential construction would be required to divert or salvage at least 65 percent of non-hazardous construction and demolition debris generated at the site.

- Municipal Code Section 15.45.050 identifies specific development standards applicable to model homes. Each residential development would be required to provide at one model home which offers and displays energy-saving options. The model home would also be required to provide signage identifying standard and optional features that contribute to overall energy efficiency of the home. Energy-saving options handout materials would be required to be available at the model home. Handout materials information would include but would not be limited descriptions of energy-saving features, their costs, benefits, and energy savings.
- Municipal Code Section 15.45.070 establishes GHG performance standards for new development, and requires that all new development contribute to the reduction of greenhouse gas emissions by demonstrating consistency with the Chino CAP through implementation of one or a combination of the following three (3) options:
    1. Exceed by 3% the mandatory California Energy Code Title 24, Part 6 standards, in effect at the time of development application submittal for discretionary review; or
    2. Achieve an equivalent reduction through voluntary measures in the California Green Building Standards Code, Title 24, Part 11 (CALGreen) in effect at the time of development application submittal for discretionary review; or
    3. Provide other equivalent GHG reductions through measures including, but not limited to, non-vehicle transportation infrastructure, transit, ZEV (zero emission vehicle) infrastructure or other incentives, waste diversion, water conservation, tree planting, renewable energy option packages, or any combination of these or other measures such that GHG emissions are reduced by 0.04 $MTCO_2e$ per residential dwelling unit per year and/or 0.11 $MTCO_2e$ per thousand square feet of commercial/industrial development per year.

2.9 DISCUSSION ON ESTABLISHMENT OF SIGNIFICANCE THRESHOLDS

As noted above, the City adopted the CAP and Plan Implementing Measures, effective in full force as of January 1, 2014. As part of the CAP, the City of Chino selected a goal to reduce its community GHG emissions to a level that is 15 percent below its 2008 GHG emissions levels by 2020 consistent with AB 32 and recommended in the AB 32 Scoping Plan. In order to fulfill this commitment, GHG emissions-reducing development and performance standards have been established under the Chino Climate Action Plan as codified at Chino Municipal Code Chapter 15.45 – Climate Action Plan Implementation. It should be noted that the City will commence planning for the post-2020 period. The post-2020 CAP should include a specific target for GHG reductions for at least 2030 and if supported by long-term planning at the state level, should also include preliminary planning for 2040 and 2050. The targets will be consistent with broader state and federal reduction targets and with the scientific understanding of the reductions needed by 2050 (45).

The Project would comply with applicable provisions of Chino Municipal Code Chapter 15.45 – Climate Action Plan Implementation. More specifically, as provided herein, development within the Project site would be required to conform to "Option 1" listed above: "Exceed by 3% the mandatory California Energy Code Title 24, Part 6 standards, in effect at the time of development application submittal for discretionary review." It should be noted in fact that the Project as part

of its design will exceed the mandatory Title 24 requirements by 3% which meets the 3% target reduction established by the City of Chino.

Because the City's CAP and Chapter 15.45 of the Chino Municipal Code address GHG emissions reduction, is in concert with AB 32 and international efforts to address global climate change and includes specific local requirements that will substantially lessen the cumulative problem, compliance with the CAP fulfills the description of mitigation found in CEQA Guidelines §15130(a)(3) and §15183.5.

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3 PROJECT GREENHOUSE GAS IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. 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 GHG impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (1):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE GHG 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) v2016.3.2. 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 measures (46). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

3.3.1 LAND USES MODELED IN CALEEMOD

The developed Project site comprises approximately 12.85 acres. As per information provided by the Project Applicant, the development of the proposed Project is to consist of 212,251 square feet of High-Cube Fulfillment Center Warehouse use (within Building 1) and 55,534 square feet of Industrial Park use (within Buildings 2-4).

CalEEMod land uses that most closely fit the described Project are reflected in these analyses. For purposes of analysis, the following land uses were modeled based on consultation with the Project Applicant and information provided in the Site Plan:

- 55.534 thousand square feet (TSF) of Unrefrigerated Warehouse – No Rail[4]

[4] As per the CalEEMod User's Guide, the Unrefrigerated Warehouse – No Rail land use is defined as a warehouse that does not have refrigeration and no rail spur.

- 212.251 TSF of Industrial Park
- 62.086 TSF Other Non-Asphalt Surfaces[5]
- 241 Space Parking Lot
- 133.673 TSF Other Asphalt Surfaces[6]

3.3.2 EMFAC2017 EMISSION RATES

On August 19, 2019, the EPA approved the 2017 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan 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 (47). This GHGA utilizes annual EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities.

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. 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* (48).

3.4 LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (49). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate (50). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

[5] The User's Guide defines Other Non-Asphalt Surfaces as non-asphalt areas. For purposes of analysis, this category is used to model the 62,086 sf of Landscaped area.

[6] The remaining 133,673 sf of the total Project Area will be modeled in CalEEMod as Other Asphalt Surfaces as non-asphalt areas. Per the User's Guide, this land use category is defined as asphalt areas that are not used as a parking lot.

3.5 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2 and CH_4 emissions The report *East End and County Industrial Air Quality Impact Analysis Report* (AQIA) (Urban Crossroads, Inc.) contains detailed information regarding Project construction activities (51). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

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

3.5.1 CONSTRUCTION DURATION

Construction is expected to commence in June 2021 and will last through December 2021. 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.[7] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (52). The duration of construction activity was based on the 2021 opening year.

TABLE 3-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Demolition	06/01/2020	07/10/2020	30
Site Preparation	07/11/2020	07/24/2020	10
Grading	07/25/2020	09/04/2020	30
Building Construction	09/05/2020	10/29/2021	300
Paving	10/30/2021	11/26/2021	20
Architectural Coating	11/27/2021	12/24/2021	20

Source: Construction activity based on the 2021 Opening Year.

3.5.2 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

[7] 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.

detailed summary of construction equipment assumptions by phase is provided at Table 3-2. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this GHGA.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Amount	Hours Per Day
Demolition	Concrete/Industrial Saws	1	8
	Excavators	3	8
	Rubber Tired Dozers	2	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Construction equipment based on CalEEMod defaults.

3.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (53). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
2020	565.80	0.11	0.00	568.50
2021	915.45	0.14	0.00	918.96
Total	1,481.25	0.25	0.00	1,487.46
Amortized Construction Emissions ($MTCO_2e$)	**49.37**	**0.01**	**0.00**	**49.58**

Source: CalEEMod annual construction-source emissions are presented in Appendix 3.1.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste

3.6.1 AREA SOURCE EMISSIONS

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.

3.6.2 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 use of pollution credits (RECLAIM) 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 will become effective on January 1, 2020. It should be noted that the analysis herein assumes compliance with the 2019 Title 24 Standards because the Project will be constructed after January 1, 2020.

3.6.3 MOBILE SOURCE EMISSIONS

The Project related operational GHG emissions derive primarily from vehicle trips generated by the Project. Trip characteristics available from the report, TIA were utilized in this analysis. Per TIA prepared by Urban Crossroads, Inc. the Project is expected to generate a total of approximately 642 two-way vehicular trips per day (321 inbound and 321 outbound) which includes 106 two-way truck trips per day (53 inbound and 53 outbound) (12). The passenger car and truck fleet for the proposed industrial uses are broken down by passenger car and truck type (or axle type).

3.6.3.1 Approach for Analysis of the Project

Two Separate model runs were utilized for each phase in order to more accurately model emissions resulting from passenger car and truck operations.

Passenger Cars

The first run analyzed passenger car emissions, incorporated the CalEEMod default trip length of 16.6 miles for passenger cars and an assumption of 100% primary trips.

It is important to note that although the TIA does not breakdown passenger cars by type, this analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[8] & LDT2[9]), and Medium-Duty-Vehicles (MDV) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix presented in Table 3-4 was utilized in this analysis.

[8] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[9] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 3-4: PASSENGER CAR FLEET MIX

Land Use	Vehicle Type	%
High-Cube Fulfillment Center Warehouse	LDA	62.06
	LDT1	4.19
	LDT2	20.27
	MDV	13.48
Industrial Park	LDA	62.06
	LDT1	4.19
	LDT2	20.27
	MDV	13.48

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

Trucks

The second run analyzed truck emissions, incorporated the SCAQMD recommended truck trip length of 40 miles[10] and an assumption of 100% primary trips.

In order to be consistent with the TIA, trucks are broken down by truck type. The trucks are comprised of 2-axle/Light-Heavy-Duty Trucks (LHDT), 3-axle/Medium-Heavy-Duty Trucks (MHDT), and 4+-axle/Heavy-Heavy-Duty Trucks (HHDT). In order to account for emissions generated by trucks, the fleet mix presented in Table 3-5 was utilized in this analysis.

It should be noted that the truck fleet mix for the High-Cube Fulfillment Center Warehouse (without Cold Storage) is comprised of 2 different truck types: 2-4-axle and 5+-axle trucks. For purposes of analysis, it is assumed that 25 percent of the 2-4 axle trucks are LHDTs, 25 percent are MHDTs, and the remaining 50 percent are HHDTs.

[10] The average trip length for heavy trucks were based on the SCAQMD documents for the implementation of the Facility-Based Mobile Source Measures (FBMSMs) adopted in the 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" cites 39.9-mile trip length for heavy-heavy trucks (41). As a conservative measure, a trip length of 40 miles has been utilized for all trucks for the purpose of this analysis.

TABLE 3-5: TRUCK FLEET MIX

Land Use	Vehicle Type	%
High-Cube Fulfillment Center Warehouse	LHDT	10.63
	MHDT	10.63
	HHDT	78.74
Industrial Park	LHDT	15.38
	MHDT	23.08
	HHDT	61.54

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips.

3.6.4 On-Site Cargo Handling Equipment Emissions

It is common for industrial warehouse buildings to require cargo handling equipment to move empty containers and empty chassis to and from the various pieces of cargo handling equipment that receive and distribute containers. The most common type of cargo handling equipment is the yard truck which is designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors (UTRs), hustlers, yard hostlers, and yard tractors. The cargo handling equipment is assumed to have a horsepower (hp) range of approximately 175 hp to 200 hp. Based on the latest available information from SCAQMD (54); for example, high-cube warehouse projects typically have 3.6 yard trucks per million sf of building space. For this particular Project, based on the maximum square footage of each building space, on-site modeled operational equipment includes up to four (4) 200 hp, compressed natural gas or gasoline-powered yard tractors operating at 4 hours a day for 365 days of the year (1 yard tractors for each building).

3.6.5 Water Supply, Treatment and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water depends on the volume of water as well as the sources of the water. CalEEMod default parameters were used to estimate GHG emissions associated with water supply, treatment and distribution for the Project scenario.

3.6.6 Solid Waste

Industrial land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the Project were calculated by CalEEMod using default parameters.

3.7 EMISSIONS SUMMARY

As shown on Table 3-6, the Project will result in approximately 1,028.15 $MTCO_2e$ per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 2,907.91 $MTCO_2e$ per year from mobile sources if the assumption is made that all of the vehicle trips to and from the Project are "new" trips resulting from the development of the Project. As such, the Project has the potential to generate a total of approximately 3,936.05 $MTCO_2e$ per year.

TABLE 3-6: PROJECT GHG EMISSIONS

Emission Source	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	49.37	0.01	0.00	49.58
Area Source	0.01750	5.00E-05	0.00	0.02
Energy Source	295.35	0.01	2.75E-03	296.46
Mobile Source (Passenger Car)	968.60	0.03	0.00	969.23
Mobile Source (Truck)	1,936.83	0.07	0.00	1,938.68
On-Site Equipment	203.36	0.07	0.00	205.01
Waste	54.48	3.22	0.00	134.96
Water Usage	276.55	2.03	0.05	342.12
Total CO_2e (All Sources)	**3,936.05**			

Source: CalEEMod™ model output, See Appendices 3.1 through 3.4 for detailed model outputs.

3.8 GREENHOUSE GAS EMISSIONS FINDINGS AND RECOMMENDATIONS

GHG Impact 1: The Project could generate direct or indirect GHG emissions that would result in a significant impact on the environment.

The City adopted The Chino CAP and Chino Municipal Code Chapter 15.45, Plan Implementing Measures, effective in full force as of November 19, 2013 (collectively, the CAP). Under the CAP, the City of Chino selected a goal to reduce its community GHG emissions to a level that is 15 percent below its 2008 GHG emissions levels by 2020 which is generally consistent with AB 32 and recommended in the AB 32 Scoping Plan. In order to fulfill this commitment, GHG emissions-reducing development and performance standards have been established under the Chino CAP as codified at Chino Municipal Code Chapter 15.45 – Climate Action Plan Implementation.

The Project would comply with applicable provisions of Chino Municipal Code Chapter 15.45 – Climate Action Plan Implementation. More specifically, development within the Project site would be required to conform to "Option 1" of Chino Municipal Code Chapter 15.45 which states: "Exceed by 3% the mandatory California Energy Code Title 24, Part 6 standards, in effect at the time of development application submittal for discretionary review."

The Project will result in approximately 1,028.15 $MTCO_2e$ per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 2,907.91 $MTCO_2e$ per year from mobile sources if the assumption is made that all of the vehicle trips to and from the Project are "new" trips resulting from the development of the Project. As such, the Project has the potential to generate a total of approximately 3,936.05 $MTCO_2e$ per year. Notwithstanding, an individual project cannot generate enough GHG emissions to influence global climate change. The Project contributes to this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together may have a significant impact on global climate change. Because the City's CAP addresses GHG emissions reduction, is in concert with AB 32 and international efforts to address global climate change and includes specific local requirements that will substantially lessen the cumulative problem, compliance with the CAP fulfills the description of mitigation found in CEQA Guidelines §15130(a)(3) and §15183.5.

As substantiated herein, the proposed Project would be consistent with the CAP and Chapter 15.45 of the Chino Municipal Code, would be in concert with AB 32 and international efforts to address global climate change, and would reflect specific local requirements that would substantially lessen cumulative GHG emissions impacts. The proposed Project would therefore also fulfill the description of mitigation found in CEQA Guidelines §15130(a)(3) and §15183.5. The Project's incremental contribution to GHG emissions impacts would therefore not be cumulatively considerable.

GHG Impact #2: The Project could not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As previously stated, pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from greenhouse gas emissions (44). As such, the Project's consistency with AB 32, SB 32, and the City's CAP are discussed below.

Consistency with AB 32 (2008 Scoping Plan)

ARB's *Scoping Plan* identifies strategies to reduce California's greenhouse gas emissions in support of AB32 which requires the State to reduce its GHG emissions to 1990 levels by 2020. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project, such as energy efficiency. Finally, while some measures are not directly applicable, the project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. **California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions.** Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic

benefits for California.[11] Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.

2. **California Light-Duty Vehicle Greenhouse Gas Standards.** Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. **Energy Efficiency.** Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. **Renewables Portfolio Standards.** Achieve 33 percent renewable energy mix statewide.
5. **Low Carbon Fuel Standard.** Develop and adopt the Low Carbon Fuel Standard.
6. **Regional Transportation-Related Greenhouse Gas Targets.** Develop regional greenhouse gas emissions reduction targets for passenger vehicles.
7. **Vehicle Efficiency Measures.** Implement light-duty vehicle efficiency measures.
8. **Goods Movement.** Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. **Million Solar Roofs Program.** Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. **Medium- and Heavy-Duty Vehicles.** Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.[12] Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. **Industrial Emissions.** Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. **High Speed Rail.** Support implementation of a high-speed rail system.
13. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. **High Global Warming Potential Gases.** Adopt measures to reduce high warming global potential gases.
15. **Recycling and Waste.** Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. **Sustainable Forests.** Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR.
17. **Water.** Continue efficiency programs and use cleaner energy sources to move and treat water.

[11] California Air Resources Board. California GHG Emissions – Forecast (2002-2020). October 2010
[12] California Air Resources Board. Scoping Plan Measures Implementation Timeline. October 2010

18. **Agriculture.** In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 3-7 summarizes the project's consistency with the State Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping.

TABLE 3-7: 2008 SCOPING PLAN CONSISTENCY SUMMARY

Action	Supporting Measures[13]	Consistency
Cap-and-Trade Program	--	Not applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect commercial projects.
Light-Duty Vehicle Standards	T-1	Not applicable. While these are CARB-enforced measures that are not directly applicable to the proposed Project, vehicles that access the Project are required to comply with the standards and will comply with this strategy. Electric Vehicle (EV) charging stations are required to be installed on site per the 2019 Title 24 standards.
Energy Efficiency	E-1 E-2 CR-1 CR-2	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with the most current CALGreen requirements.
Renewables Portfolio Standard	E-3	Not applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related GHG Targets	T-3	Not applicable. This is a statewide measure and is not within the purview of this Project.
Vehicle Efficiency Measures	T-4	Not applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While

[13] Supporting measures can be found at the following link: http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf

Action	Supporting Measures[13]	Consistency
	T-6	these measures are not directly applicable to the Project, any commercial activity associated with Goods Movement would be required to comply with these measures as adopted. As such, the proposed Project would not interfere with their implementation.
Million Solar Roofs (MSR) Program	E-4	Consistent. The MSR program sets a goal for use of solar systems throughout the state as a whole. While the Project currently does not include solar energy generation, the building roof structure will be designed to support solar panels in the future, consistent with Title 24 requirements.
Medium- & Heavy-Duty Vehicles	T-7	Not applicable. MD and HD trucks and trailers for industrial uses are be subject to aerodynamic and hybridization requirements as established by CARB; the proposed Project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	Not applicable. These measures are applicable to large industrial facilities (> 500,000 $MTCO_2e$/yr) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with the current CALGreen requirements.
High Global Warming Potential Gases	H-1	Not applicable. The proposed Project is not a substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project will be required recycle a minimum of 65 percent from construction activities and Project operations per State and City requirements.
	RW-2	
	RW-3	

Action	Supporting Measures[13]	Consistency
Sustainable Forests	F-1	Consistent. The Project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	Consistent. The Project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not applicable. The Project is not an agricultural use.

Consistency with SB 32 (2017 Scoping Plan Update)

The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 3-8 summarizes the project's consistency with the 2017 Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories.

TABLE 3-8: 2017 SCOPING PLAN CONSISTENCY SUMMARY[14]

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. The Project would use energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The Project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The Project would be designed and constructed to implement the energy efficiency measures for new commercial developments and would include several measures designed to reduce energy consumption. The Project would not interfere with or obstruct policies or strategies to establish annual targets for statewide energy efficiency savings and demand reduction.

[14] Measures can be found at the following link: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

Action	Responsible Parties	Consistency
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		Consistent. The proposed Project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The proposed Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty electric vehicle 2025 targets.
At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty electric vehicle 2030 targets.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts improve transit-source emissions.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.

Action	Responsible Parties	Consistency
trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.		
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Consistent. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. The Project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions and increase competitiveness of transit and active transportation modes.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Consistent. The Project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.

Action	Responsible Parties	Consistency
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. This measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector. The Project would not obstruct or interfere with agency efforts to Improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Consistent. The Project would not obstruct or interfere with agency efforts to deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18 percent.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18 percent.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		
40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Consistent. The Project would be required to comply with this measure and reduce any Project-source SLPS emissions accordingly. The Project would not obstruct or interfere agency efforts to reduce SLPS emissions.
50 percent reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA SWRCB, Local Air Districts	Consistent. The Project would implement waste reduction and recycling measures consistent with State and City requirements. The Project would not obstruct or interfere agency efforts to support organic waste landfill reduction goals in the SLCP and SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Consistent. The Project would be required to comply with any applicable Cap-and-Trade Program provisions. The Project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.

Action	Responsible Parties	Consistency
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Consistent. The Project would not obstruct or interfere agency efforts to protect land from conversion through conservation easements and other incentives.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Consistent. The Project site is vacant disturbed property and does not comprise an area that would effectively provide for carbon sequestration. The Project would not obstruct or interfere agency efforts to increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Consistent. Where appropriate, Project designs will incorporate wood or wood products. The Project would not obstruct or interfere agency efforts to encourage use of wood and agricultural products to increase the amount of carbon stored in the natural and built environments.
Establish scenario projections to serve as the foundation for the Implementation Plan		Consistent. The Project would not obstruct or interfere agency efforts to establish scenario projections to serve as the foundation for the Implementation Plan.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Consistent. The Project would not obstruct or interfere agency efforts to establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Consistent. The Project would not obstruct or interfere agency efforts to implement the Forest Carbon Plan.
	State Agencies & Local Agencies	Consistent. The Project would not obstruct or interfere agency efforts to

Action	Responsible Parties	Consistency
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.		identify and expand funding and financing mechanisms to support GHG reductions across all sectors.

As shown above, the Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 (39).

The project applicant would not actively interfere with any future City-mandated, state-mandated, or federally-mandated retrofit obligations enacted or promulgated to legally require development City-wide, state-wide, or nation-wide to assist in meeting state-adopted GHG emissions reduction targets, including that established under Executive Order S-3-05, Executive Order B-30-15, or SB 32.

The Project does not interfere with the state's implementation of (i) Executive Order B-30-15 and SB 32's target of reducing statewide GHG emissions to 40% below 1990 levels by 2030 or (ii) Executive Order S-3-05's target of reducing statewide GHG emissions to 80% below 1990 levels by 2050 because it does not interfere with the state's implementation of GHG reduction plans described in the CARB's Updated Scoping Plan, including the state providing for 12,000 MW of renewable distributed generation by 2020, the California Building Commission mandating net zero energy homes in the building code after 2020, or existing building retrofits under AB 758. Therefore, the project's impacts on GHG emissions in the 2030 and 2050 horizon years are less than significant.

Consistency with City of Chino CAP

The proposed Project would be consistent with the CAP and Chapter 15.45 of the Chino Municipal Code, would be in concert with AB 32 and international efforts to address global climate change, and would reflect specific local requirements that would substantially lessen cumulative GHG emissions impacts. The proposed Project would therefore also fulfill the description of mitigation found in *CEQA Guidelines* §15130(a)(3) and §15183.5. The Project's incremental contribution to GHG emissions impacts would therefore not be cumulatively considerable.

Less than significant impact.

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5 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed East End and County Industrial Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

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University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:

CALEEMOD ANNUAL CONSTRUCTION EMISSIONS MODEL OUTPUTS

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East End and County Industrial (Construction - Unmitigated)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	55.53	1000sqft	1.27	55,534.00	0
Unrefrigerated Warehouse-No Rail	212.25	1000sqft	4.87	212,251.00	0
Other Asphalt Surfaces	133.67	1000sqft	3.07	133,673.00	0
Other Non-Asphalt Surfaces	62.09	1000sqft	1.43	62,086.00	0
Parking Lot	241.00	Space	2.21	96,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

East End and County Industrial (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

Project Characteristics -

Land Use - Based on the Site Plan, the Total Project Area is 12.85 acres.

Construction Phase - Operational Year 2024

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Off-road Equipment -

Off-road Equipment - Crawler Tractors used in lieu of Tractors/Loaders/Backhoes.

Demolition -

Grading - For purposes of analysis, total acres graded per day is based on the equipment specific grading rates (CalEEMod Appendix A) and the equipment list.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	20.00	30.00
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00

tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	3.07	0.00
tblEnergyUse	T24E	0.37	0.00
tblEnergyUse	T24NG	3.47	0.00
tblEnergyUse	T24NG	2.00	0.00
tblGrading	AcresOfGrading	105.00	120.00
tblGrading	AcresOfGrading	20.00	35.00
tblLandUse	LotAcreage	2.17	2.21
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	68.86	0.00
tblSolidWaste	SolidWasteGenerationRate	199.51	0.00
tblVehicleEF	HHD	1.24	0.03
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	3.46	7.82
tblVehicleEF	HHD	0.58	0.51
tblVehicleEF	HHD	1.92	2.4420e-003
tblVehicleEF	HHD	6,983.95	1,459.93
tblVehicleEF	HHD	1,493.95	1,411.06
tblVehicleEF	HHD	5.71	0.02

tblVehicleEF	HHD	28.07	7.65
tblVehicleEF	HHD	2.87	3.24
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.9170e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	9.3000e-005	4.0000e-006
tblVehicleEF	HHD	3.4490e-003	1.2600e-004
tblVehicleEF	HHD	0.89	0.60
tblVehicleEF	HHD	5.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	2.4200e-004	6.3700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.07	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.3000e-005	4.0000e-006
tblVehicleEF	HHD	3.4490e-003	1.2600e-004
tblVehicleEF	HHD	1.02	0.68
tblVehicleEF	HHD	5.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.13	0.16

tblVehicleEF	HHD	2.4200e-004	6.3700e-004
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	HHD	1.17	0.03
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	2.52	7.65
tblVehicleEF	HHD	0.58	0.51
tblVehicleEF	HHD	1.80	2.2950e-003
tblVehicleEF	HHD	7,395.94	1,453.32
tblVehicleEF	HHD	1,493.95	1,411.06
tblVehicleEF	HHD	5.71	0.02
tblVehicleEF	HHD	28.97	7.40
tblVehicleEF	HHD	2.70	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.9170e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	1.8400e-004	9.0000e-006
tblVehicleEF	HHD	3.9090e-003	1.4800e-004
tblVehicleEF	HHD	0.84	0.62
tblVehicleEF	HHD	1.2900e-004	6.0000e-006

tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	2.4800e-004	6.5700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.07	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	0.00
tblVehicleEF	HHD	1.8400e-004	9.0000e-006
tblVehicleEF	HHD	3.9090e-003	1.4800e-004
tblVehicleEF	HHD	0.97	0.71
tblVehicleEF	HHD	1.2900e-004	6.0000e-006
tblVehicleEF	HHD	0.13	0.16
tblVehicleEF	HHD	2.4800e-004	6.5700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	1.34	0.03
tblVehicleEF	HHD	0.04	3.7740e-003
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	4.76	7.98
tblVehicleEF	HHD	0.58	0.36
tblVehicleEF	HHD	1.89	2.4140e-003
tblVehicleEF	HHD	6,415.00	1,454.79
tblVehicleEF	HHD	1,493.95	1,371.01
tblVehicleEF	HHD	5.71	0.02
tblVehicleEF	HHD	26.84	7.90
tblVehicleEF	HHD	2.83	3.15
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8160e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	9.4000e-005	4.0000e-006
tblVehicleEF	HHD	3.7830e-003	1.4900e-004
tblVehicleEF	HHD	0.96	0.56
tblVehicleEF	HHD	5.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	2.5900e-004	6.6600e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.4000e-005	4.0000e-006
tblVehicleEF	HHD	3.7830e-003	1.4900e-004
tblVehicleEF	HHD	1.10	0.64
tblVehicleEF	HHD	5.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.13	0.09
tblVehicleEF	HHD	2.5900e-004	6.6600e-004
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	LDA	4.6640e-003	2.7950e-003
tblVehicleEF	LDA	6.4640e-003	0.06
tblVehicleEF	LDA	0.62	0.70

tblVehicleEF	LDA	1.32	2.22
tblVehicleEF	LDA	261.85	269.33
tblVehicleEF	LDA	59.28	55.48
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.25
tblVehicleEF	LDA	2.6230e-003	2.6640e-003
tblVehicleEF	LDA	6.1500e-004	5.4900e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27
tblVehicleEF	LDA	5.3170e-003	3.2030e-003
tblVehicleEF	LDA	5.3900e-003	0.05
tblVehicleEF	LDA	0.76	0.86
tblVehicleEF	LDA	1.10	1.85
tblVehicleEF	LDA	286.52	294.16

tblVehicleEF	LDA	59.28	54.75
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.13	0.13
tblVehicleEF	LDA	0.08	0.11
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.8710e-003	2.9100e-003
tblVehicleEF	LDA	6.1100e-004	5.4200e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.13	0.13
tblVehicleEF	LDA	0.08	0.11
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	4.5320e-003	2.7260e-003
tblVehicleEF	LDA	6.4200e-003	0.06
tblVehicleEF	LDA	0.58	0.67
tblVehicleEF	LDA	1.30	2.19
tblVehicleEF	LDA	256.02	263.51
tblVehicleEF	LDA	59.28	55.41
tblVehicleEF	LDA	0.05	0.04

tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.25
tblVehicleEF	LDA	2.5640e-003	2.6070e-003
tblVehicleEF	LDA	6.1500e-004	5.4800e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.1890e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.63
tblVehicleEF	LDT1	4.02	2.54
tblVehicleEF	LDT1	323.73	319.09
tblVehicleEF	LDT1	72.77	67.44
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003

tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003
tblVehicleEF	LDT1	0.19	0.21
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.29	0.48
tblVehicleEF	LDT1	3.2600e-003	3.1580e-003
tblVehicleEF	LDT1	7.9900e-004	6.6700e-004
tblVehicleEF	LDT1	0.19	0.21
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.31	0.53
tblVehicleEF	LDT1	0.02	9.2860e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	2.05	1.97
tblVehicleEF	LDT1	3.30	2.10
tblVehicleEF	LDT1	352.65	345.09
tblVehicleEF	LDT1	72.77	66.47
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003
tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003

tblVehicleEF	LDT1	0.40	0.44
tblVehicleEF	LDT1	0.44	0.36
tblVehicleEF	LDT1	0.29	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4150e-003
tblVehicleEF	LDT1	7.8600e-004	6.5800e-004
tblVehicleEF	LDT1	0.40	0.44
tblVehicleEF	LDT1	0.44	0.36
tblVehicleEF	LDT1	0.29	0.32
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	7.9980e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.62	1.55
tblVehicleEF	LDT1	3.95	2.49
tblVehicleEF	LDT1	316.91	312.93
tblVehicleEF	LDT1	72.77	67.36
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003
tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.41	0.33

tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.0970e-003
tblVehicleEF	LDT1	7.9800e-004	6.6700e-004
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.31	0.53
tblVehicleEF	LDT2	6.9330e-003	4.8260e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.06
tblVehicleEF	LDT2	1.85	2.89
tblVehicleEF	LDT2	363.70	344.02
tblVehicleEF	LDT2	81.97	72.94
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.13	0.38
tblVehicleEF	LDT2	3.6440e-003	3.4040e-003
tblVehicleEF	LDT2	8.5100e-004	7.2200e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.14	0.42
tblVehicleEF	LDT2	7.8730e-003	5.5090e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.30
tblVehicleEF	LDT2	1.53	2.39
tblVehicleEF	LDT2	397.09	369.57
tblVehicleEF	LDT2	81.97	71.94
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.10	0.32

tblVehicleEF	LDT2	3.9810e-003	3.6570e-003
tblVehicleEF	LDT2	8.4600e-004	7.1200e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.11	0.35
tblVehicleEF	LDT2	6.7430e-003	4.7100e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.01
tblVehicleEF	LDT2	1.82	2.84
tblVehicleEF	LDT2	355.82	337.97
tblVehicleEF	LDT2	81.97	72.85
tblVehicleEF	LDT2	0.09	0.10
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.12	0.38
tblVehicleEF	LDT2	3.5650e-003	3.3440e-003
tblVehicleEF	LDT2	8.5100e-004	7.2100e-004

tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.14	0.41
tblVehicleEF	LHD1	5.4860e-003	4.9840e-003
tblVehicleEF	LHD1	0.01	7.1410e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.77	1.07
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.99
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.26	1.69
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6200e-004	1.0900e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD1	5.4860e-003	5.0000e-003
tblVehicleEF	LHD1	0.01	7.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.18	0.99
tblVehicleEF	LHD1	2.58	1.00
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.98
tblVehicleEF	LHD1	30.92	10.87
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.12	1.58
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004

tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0370e-003	6.3960e-003
tblVehicleEF	LHD1	3.5800e-004	1.0800e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.30	0.09
tblVehicleEF	LHD1	5.4860e-003	4.9870e-003
tblVehicleEF	LHD1	0.01	7.1590e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.72	1.05
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.96
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.22	1.66
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6100e-004	1.0800e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003

tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.8190e-003	3.4060e-003
tblVehicleEF	LHD2	5.2410e-003	4.5240e-003
tblVehicleEF	LHD2	9.1660e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61
tblVehicleEF	LHD2	1.29	0.64
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.51
tblVehicleEF	LHD2	24.89	7.96
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.69	1.81
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7300e-004	7.9000e-005
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4160e-003
tblVehicleEF	LHD2	5.3190e-003	4.5750e-003
tblVehicleEF	LHD2	8.7380e-003	9.6870e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.56	0.62
tblVehicleEF	LHD2	1.21	0.60
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.89
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.59	1.70
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7100e-004	7.8000e-005
tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4070e-003
tblVehicleEF	LHD2	5.2490e-003	4.5300e-003
tblVehicleEF	LHD2	9.0820e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61

tblVehicleEF	LHD2	1.27	0.63
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.94
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.67	1.78
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7200e-004	7.9000e-005
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004

tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.42	0.33
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	21.02	21.16
tblVehicleEF	MCY	9.91	8.77
tblVehicleEF	MCY	167.12	211.16
tblVehicleEF	MCY	46.87	61.87
tblVehicleEF	MCY	1.17	1.17
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.45	1.44
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.26	2.26
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.17	1.92
tblVehicleEF	MCY	2.0790e-003	2.0900e-003
tblVehicleEF	MCY	6.9500e-004	6.1200e-004
tblVehicleEF	MCY	1.45	1.44
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.76	2.76
tblVehicleEF	MCY	0.50	2.09

tblVehicleEF	MCY	2.37	2.08
tblVehicleEF	MCY	0.41	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	21.14	21.29
tblVehicleEF	MCY	9.06	7.97
tblVehicleEF	MCY	167.12	211.14
tblVehicleEF	MCY	46.87	59.68
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12
tblVehicleEF	MCY	2.19	2.19
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	1.87	1.64
tblVehicleEF	MCY	2.0790e-003	2.0890e-003
tblVehicleEF	MCY	6.7100e-004	5.9100e-004
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12
tblVehicleEF	MCY	2.69	2.68
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.03	1.78
tblVehicleEF	MCY	0.42	0.33

tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	20.18
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	209.47
tblVehicleEF	MCY	46.87	61.06
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.22	2.22
tblVehicleEF	MCY	0.57	2.38
tblVehicleEF	MCY	2.10	1.84
tblVehicleEF	MCY	2.0630e-003	2.0730e-003
tblVehicleEF	MCY	6.8600e-004	6.0400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.71	2.71
tblVehicleEF	MCY	0.57	2.38
tblVehicleEF	MCY	2.28	2.00
tblVehicleEF	MDV	0.01	6.6050e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.33

tblVehicleEF	MDV	3.59	3.53
tblVehicleEF	MDV	498.66	425.70
tblVehicleEF	MDV	110.76	90.07
tblVehicleEF	MDV	0.20	0.14
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MDV	5.0000e-003	4.2090e-003
tblVehicleEF	MDV	1.1710e-003	8.9100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MDV	0.02	7.4780e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.60
tblVehicleEF	MDV	2.99	2.92
tblVehicleEF	MDV	542.90	452.84

tblVehicleEF	MDV	110.76	88.84
tblVehicleEF	MDV	0.18	0.12
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.21	0.25
tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.24	0.42
tblVehicleEF	MDV	5.4470e-003	4.4780e-003
tblVehicleEF	MDV	1.1600e-003	8.7900e-004
tblVehicleEF	MDV	0.21	0.25
tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.26	0.46
tblVehicleEF	MDV	0.01	6.4310e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.47
tblVehicleEF	MDV	488.33	419.25
tblVehicleEF	MDV	110.76	89.97
tblVehicleEF	MDV	0.19	0.13

tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.28	0.49
tblVehicleEF	MDV	4.8960e-003	4.1450e-003
tblVehicleEF	MDV	1.1700e-003	8.9000e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.60	0.37
tblVehicleEF	MH	6.96	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.64	4.70
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15

tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.2000e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.44	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.74	0.37
tblVehicleEF	MH	6.31	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.50	4.42
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15

tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.0900e-004	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.41	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.61	0.37
tblVehicleEF	MH	6.87	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.61	4.62
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15

tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
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tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.1900e-004	0.00
tblVehicleEF	MH	1.88	0.00
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.43	0.00
tblVehicleEF	MHD	0.02	3.2250e-003
tblVehicleEF	MHD	4.1450e-003	6.0340e-003
tblVehicleEF	MHD	0.06	8.8310e-003
tblVehicleEF	MHD	0.33	0.34
tblVehicleEF	MHD	0.31	0.55
tblVehicleEF	MHD	6.00	1.03
tblVehicleEF	MHD	155.10	71.06
tblVehicleEF	MHD	1,105.72	1,029.53
tblVehicleEF	MHD	53.92	8.43

tblVehicleEF	MHD	0.63	0.61
tblVehicleEF	MHD	1.08	2.22
tblVehicleEF	MHD	4.3700e-004	2.0190e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	4.1800e-004	1.9320e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.05
tblVehicleEF	MHD	1.4910e-003	6.7400e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.4400e-004	8.3000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
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tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	3.0610e-003
tblVehicleEF	MHD	4.2290e-003	6.0860e-003

tblVehicleEF	MHD	0.05	8.4200e-003
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tblVehicleEF	MHD	5.61	0.96
tblVehicleEF	MHD	164.29	72.29
tblVehicleEF	MHD	1,105.72	1,029.54
tblVehicleEF	MHD	53.92	8.32
tblVehicleEF	MHD	0.65	0.62
tblVehicleEF	MHD	1.01	2.09
tblVehicleEF	MHD	3.6900e-004	1.7050e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	3.5300e-004	1.6310e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	2.8480e-003	1.3100e-003
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.35	0.04
tblVehicleEF	MHD	1.5770e-003	6.8600e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.3800e-004	8.2000e-005
tblVehicleEF	MHD	2.8480e-003	1.3100e-003
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
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tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.38	0.05
tblVehicleEF	MHD	0.02	3.4660e-003
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tblVehicleEF	MHD	0.06	8.7320e-003
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tblVehicleEF	MHD	1,105.72	1,029.53
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tblVehicleEF	MHD	1.06	2.18
tblVehicleEF	MHD	5.3200e-004	2.4540e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	5.0900e-004	2.3480e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	1.5800e-003	7.2800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
tblVehicleEF	MHD	0.04	0.10

tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.36	0.05
tblVehicleEF	MHD	1.3710e-003	6.5800e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.4300e-004	8.3000e-005
tblVehicleEF	MHD	1.5800e-003	7.2800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
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tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.39	0.05
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tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.27	0.49
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tblVehicleEF	OBUS	1,126.32	1,507.23
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tblVehicleEF	OBUS	1.1300e-004	1.5090e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	1.0800e-004	1.4440e-003

tblVehicleEF	OBUS	5.1650e-003	0.02
tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	2.2350e-003	2.8130e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.41	0.13
tblVehicleEF	OBUS	6.8200e-004	6.5300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	2.2000e-004
tblVehicleEF	OBUS	2.2350e-003	2.8130e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.45	0.15
tblVehicleEF	OBUS	0.01	9.3930e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.47
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tblVehicleEF	OBUS	1,126.32	1,507.28

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tblVehicleEF	OBUS	1.02	1.35
tblVehicleEF	OBUS	9.5000e-005	1.2750e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	9.1000e-005	1.2200e-003
tblVehicleEF	OBUS	5.1650e-003	0.02
tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	4.3510e-003	5.4910e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	2.1830e-003	2.6560e-003
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	7.1200e-004	6.5600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1800e-004	2.1600e-004
tblVehicleEF	OBUS	4.3510e-003	5.4910e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	2.1830e-003	2.6560e-003
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tblVehicleEF	OBUS	0.03	0.03
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tblVehicleEF	OBUS	1.3700e-004	1.8320e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	1.3100e-004	1.7520e-003
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tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	2.3980e-003	3.0600e-003
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tblVehicleEF	OBUS	9.5900e-004	1.1590e-003
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tblVehicleEF	OBUS	0.01	0.01
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tblVehicleEF	OBUS	2.3980e-003	3.0600e-003

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tblVehicleEF	SBUS	0.03	0.03
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tblVehicleEF	SBUS	0.01	3.7780e-003

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tblVehicleEF	SBUS	0.03	0.03
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tblVehicleEF	SBUS	0.01	3.6140e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
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tblVehicleEF	SBUS	0.02	6.1530e-003
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tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
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tblVehicleEF	SBUS	9.6420e-003	0.04
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tblVehicleEF	SBUS	0.02	6.1530e-003
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tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
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tblVehicleEF	SBUS	9.6420e-003	0.04
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tblVehicleEF	SBUS	4.5600e-004	3.1000e-005
tblVehicleEF	SBUS	3.2090e-003	7.9400e-004

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tblVehicleEF	UBUS	8.4220e-003	1.6730e-003
tblVehicleEF	UBUS	0.12	0.01
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tblVehicleEF	UBUS	0.02	0.05
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tblVehicleEF	UBUS	0.08	0.02
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tblVehicleEF	UBUS	0.01	0.03
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tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
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tblVehicleEF	UBUS	0.15	0.01
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tblVehicleEF	UBUS	0.02	0.05
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tblVehicleEF	UBUS	0.02	3.2040e-003
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tblVehicleEF	UBUS	9.6640e-003	1.6440e-003
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tblVehicleEF	UBUS	1.16	0.07
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tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	9.80	32.64
tblVehicleEF	UBUS	14.43	1.42
tblVehicleEF	UBUS	1,861.83	1,734.35
tblVehicleEF	UBUS	135.15	17.36
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01

tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	0.66	0.06
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.6140e-003	1.7200e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	2.68	4.28
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.28	0.08
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00

tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	79.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	2.49	0.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.73	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	6.83	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	12,841,312.50	0.00
tblWater	IndoorWaterUseRate	49,082,812.50	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3638	3.8643	2.2211	6.3000e-003	0.5321	0.1477	0.6798	0.1666	0.1371	0.3037	0.0000	565.7957	565.7957	0.1081	0.0000	568.4979
2021	1.1659	4.8750	3.2589	0.0102	0.3477	0.1710	0.5187	0.0938	0.1596	0.2534	0.0000	915.4550	915.4550	0.1402	0.0000	918.9589
Maximum	**1.1659**	**4.8750**	**3.2589**	**0.0102**	**0.5321**	**0.1710**	**0.6798**	**0.1666**	**0.1596**	**0.3037**	**0.0000**	**915.4550**	**915.4550**	**0.1402**	**0.0000**	**918.9589**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3638	3.8643	2.2211	6.3000e-003	0.2984	0.1477	0.4460	0.0895	0.1371	0.2266	0.0000	565.7953	565.7953	0.1081	0.0000	568.4975
2021	1.1659	4.8750	3.2589	0.0102	0.3477	0.1710	0.5187	0.0938	0.1596	0.2534	0.0000	915.4545	915.4545	0.1402	0.0000	918.9584
Maximum	**1.1659**	**4.8750**	**3.2589**	**0.0102**	**0.3477**	**0.1710**	**0.5187**	**0.0938**	**0.1596**	**0.2534**	**0.0000**	**915.4545**	**915.4545**	**0.1402**	**0.0000**	**918.9584**

	ROG	NOx	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**	**26.57**	**0.00**	**19.50**	**29.61**	**0.00**	**13.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.9039	1.9039
2	9-1-2020	11-30-2020	1.7141	1.7141
3	12-1-2020	2-28-2021	1.5902	1.5902
4	3-1-2021	5-31-2021	1.5807	1.5807
5	6-1-2021	8-31-2021	1.5812	1.5812
6	9-1-2021	9-30-2021	0.5156	0.5156
		Highest	1.9039	1.9039

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

	ROG	NOx	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

East End and County Industrial (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	7/10/2020	5	30	
2	Site Preparation	Site Preparation	7/11/2020	7/24/2020	5	10	
3	Grading	Grading	7/25/2020	9/4/2020	5	30	
4	Building Construction	Building Construction	9/5/2020	10/29/2021	5	300	
5	Paving	Paving	10/30/2021	11/26/2021	5	20	
6	Architectural Coating	Architectural Coating	11/27/2021	12/24/2021	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 120

Acres of Paving: 6.71

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 401,678; Non-Residential Outdoor: 133,893; Striped Parking Area: 17,530 (Architectural Coating – sqft)

OffRoad Equipment

East End and County Industrial (Construction - Unmitigated) - San Bernardino-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Crawler Tractors	3	8.00	212	0.43
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	1,112.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	235.00	92.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	47.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1204	0.0000	0.1204	0.0182	0.0000	0.0182	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0497	0.4980	0.3263	5.8000e-004		0.0249	0.0249		0.0231	0.0231	0.0000	50.9979	50.9979	0.0144	0.0000	51.3578
Total	**0.0497**	**0.4980**	**0.3263**	**5.8000e-004**	**0.1204**	**0.0249**	**0.1452**	**0.0182**	**0.0231**	**0.0414**	**0.0000**	**50.9979**	**50.9979**	**0.0144**	**0.0000**	**51.3578**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5200e-003	0.1405	0.0215	4.3000e-004	9.5700e-003	4.1000e-004	9.9800e-003	2.6300e-003	3.9000e-004	3.0200e-003	0.0000	41.5414	41.5414	2.3500e-003	0.0000	41.6002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	8.7000e-004	8.7300e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4800e-003	6.6000e-004	2.0000e-005	6.7000e-004	0.0000	2.1146	2.1146	6.0000e-005	0.0000	2.1162
Total	**4.6300e-003**	**0.1413**	**0.0302**	**4.5000e-004**	**0.0120**	**4.3000e-004**	**0.0125**	**3.2900e-003**	**4.1000e-004**	**3.6900e-003**	**0.0000**	**43.6560**	**43.6560**	**2.4100e-003**	**0.0000**	**43.7164**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0469	0.0000	0.0469	7.1100e-003	0.0000	7.1100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0497	0.4980	0.3263	5.8000e-004		0.0249	0.0249		0.0231	0.0231	0.0000	50.9979	50.9979	0.0144	0.0000	51.3578
Total	**0.0497**	**0.4980**	**0.3263**	**5.8000e-004**	**0.0469**	**0.0249**	**0.0718**	**7.1100e-003**	**0.0231**	**0.0302**	**0.0000**	**50.9979**	**50.9979**	**0.0144**	**0.0000**	**51.3578**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5200e-003	0.1405	0.0215	4.3000e-004	9.5700e-003	4.1000e-004	9.9800e-003	2.6300e-003	3.9000e-004	3.0200e-003	0.0000	41.5414	41.5414	2.3500e-003	0.0000	41.6002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	8.7000e-004	8.7300e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4800e-003	6.6000e-004	2.0000e-005	6.7000e-004	0.0000	2.1146	2.1146	6.0000e-005	0.0000	2.1162
Total	**4.6300e-003**	**0.1413**	**0.0302**	**4.5000e-004**	**0.0120**	**4.3000e-004**	**0.0125**	**3.2900e-003**	**4.1000e-004**	**3.6900e-003**	**0.0000**	**43.6560**	**43.6560**	**2.4100e-003**	**0.0000**	**43.7164**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1089	0.0000	0.1089	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0278	0.3189	0.1120	2.8000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	25.0545	25.0545	8.1000e-003	0.0000	25.2571
Total	**0.0278**	**0.3189**	**0.1120**	**2.8000e-004**	**0.1089**	**0.0139**	**0.1228**	**0.0517**	**0.0128**	**0.0645**	**0.0000**	**25.0545**	**25.0545**	**8.1000e-003**	**0.0000**	**25.2571**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.4900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8458	0.8458	3.0000e-005	0.0000	0.8465
Total	**4.4000e-004**	**3.5000e-004**	**3.4900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8458**	**0.8458**	**3.0000e-005**	**0.0000**	**0.8465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0425	0.0000	0.0425	0.0202	0.0000	0.0202	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0278	0.3189	0.1120	2.8000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	25.0545	25.0545	8.1000e-003	0.0000	25.2571
Total	**0.0278**	**0.3189**	**0.1120**	**2.8000e-004**	**0.0425**	**0.0139**	**0.0564**	**0.0202**	**0.0128**	**0.0330**	**0.0000**	**25.0545**	**25.0545**	**8.1000e-003**	**0.0000**	**25.2571**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.4900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8458	0.8458	3.0000e-005	0.0000	0.8465
Total	**4.4000e-004**	**3.5000e-004**	**3.4900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8458**	**0.8458**	**3.0000e-005**	**0.0000**	**0.8465**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1540	0.0000	0.1540	0.0565	0.0000	0.0565	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0778	0.9132	0.4860	1.0700e-003		0.0370	0.0370		0.0341	0.0341	0.0000	94.2352	94.2352	0.0305	0.0000	94.9972
Total	**0.0778**	**0.9132**	**0.4860**	**1.0700e-003**	**0.1540**	**0.0370**	**0.1910**	**0.0565**	**0.0341**	**0.0906**	**0.0000**	**94.2352**	**94.2352**	**0.0305**	**0.0000**	**94.9972**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.1600e-003	0.0116	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.8195	2.8195	8.0000e-005	0.0000	2.8216
Total	**1.4800e-003**	**1.1600e-003**	**0.0116**	**3.0000e-005**	**3.2900e-003**	**2.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.8195**	**2.8195**	**8.0000e-005**	**0.0000**	**2.8216**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0600	0.0000	0.0600	0.0220	0.0000	0.0220	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0778	0.9132	0.4860	1.0700e-003		0.0370	0.0370		0.0341	0.0341	0.0000	94.2351	94.2351	0.0305	0.0000	94.9971
Total	**0.0778**	**0.9132**	**0.4860**	**1.0700e-003**	**0.0600**	**0.0370**	**0.0971**	**0.0220**	**0.0341**	**0.0561**	**0.0000**	**94.2351**	**94.2351**	**0.0305**	**0.0000**	**94.9971**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.1600e-003	0.0116	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.8195	2.8195	8.0000e-005	0.0000	2.8216
Total	**1.4800e-003**	**1.1600e-003**	**0.0116**	**3.0000e-005**	**3.2900e-003**	**2.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.8195**	**2.8195**	**8.0000e-005**	**0.0000**	**2.8216**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1413	1.5404	0.7824	1.8100e-003		0.0688	0.0688		0.0642	0.0642	0.0000	156.7720	156.7720	0.0430	0.0000	157.8463
Total	**0.1413**	**1.5404**	**0.7824**	**1.8100e-003**		**0.0688**	**0.0688**		**0.0642**	**0.0642**	**0.0000**	**156.7720**	**156.7720**	**0.0430**	**0.0000**	**157.8463**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4125	0.0863	1.0300e-003	0.0244	1.8900e-003	0.0263	7.0300e-003	1.8000e-003	8.8400e-003	0.0000	98.6545	98.6545	6.8300e-003	0.0000	98.8252
Worker	0.0488	0.0383	0.3828	1.0300e-003	0.1082	7.2000e-004	0.1089	0.0287	6.7000e-004	0.0294	0.0000	92.7602	92.7602	2.7900e-003	0.0000	92.8299
Total	**0.0608**	**0.4508**	**0.4691**	**2.0600e-003**	**0.1326**	**2.6100e-003**	**0.1352**	**0.0358**	**2.4700e-003**	**0.0383**	**0.0000**	**191.4148**	**191.4148**	**9.6200e-003**	**0.0000**	**191.6551**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1413	1.5404	0.7824	1.8100e-003		0.0688	0.0688		0.0642	0.0642	0.0000	156.7718	156.7718	0.0430	0.0000	157.8461
Total	**0.1413**	**1.5404**	**0.7824**	**1.8100e-003**		**0.0688**	**0.0688**		**0.0642**	**0.0642**	**0.0000**	**156.7718**	**156.7718**	**0.0430**	**0.0000**	**157.8461**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0120	0.4125	0.0863	1.0300e-003	0.0244	1.8900e-003	0.0263	7.0300e-003	1.8000e-003	8.8400e-003	0.0000	98.6545	98.6545	6.8300e-003	0.0000	98.8252
Worker	0.0488	0.0383	0.3828	1.0300e-003	0.1082	7.2000e-004	0.1089	0.0287	6.7000e-004	0.0294	0.0000	92.7602	92.7602	2.7900e-003	0.0000	92.8299
Total	**0.0608**	**0.4508**	**0.4691**	**2.0600e-003**	**0.1326**	**2.6100e-003**	**0.1352**	**0.0358**	**2.4700e-003**	**0.0383**	**0.0000**	**191.4148**	**191.4148**	**9.6200e-003**	**0.0000**	**191.6551**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3363	3.6683	1.9651	4.6500e-003		0.1594	0.1594		0.1488	0.1488	0.0000	403.1152	403.1152	0.1098	0.0000	405.8607
Total	**0.3363**	**3.6683**	**1.9651**	**4.6500e-003**		**0.1594**	**0.1594**		**0.1488**	**0.1488**	**0.0000**	**403.1152**	**403.1152**	**0.1098**	**0.0000**	**405.8607**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0263	0.9666	0.1967	2.6400e-003	0.0626	1.6600e-003	0.0643	0.0181	1.5900e-003	0.0197	0.0000	252.3379	252.3379	0.0170	0.0000	252.7630
Worker	0.1168	0.0883	0.9043	2.5600e-003	0.2783	1.8100e-003	0.2801	0.0739	1.6700e-003	0.0756	0.0000	230.9327	230.9327	6.4600e-003	0.0000	231.0943
Total	**0.1432**	**1.0550**	**1.1010**	**5.2000e-003**	**0.3409**	**3.4700e-003**	**0.3444**	**0.0920**	**3.2600e-003**	**0.0953**	**0.0000**	**483.2707**	**483.2707**	**0.0235**	**0.0000**	**483.8573**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3363	3.6683	1.9651	4.6500e-003		0.1594	0.1594		0.1488	0.1488	0.0000	403.1147	403.1147	0.1098	0.0000	405.8602
Total	**0.3363**	**3.6683**	**1.9651**	**4.6500e-003**		**0.1594**	**0.1594**		**0.1488**	**0.1488**	**0.0000**	**403.1147**	**403.1147**	**0.1098**	**0.0000**	**405.8602**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0263	0.9666	0.1967	2.6400e-003	0.0626	1.6600e-003	0.0643	0.0181	1.5900e-003	0.0197	0.0000	252.3379	252.3379	0.0170	0.0000	252.7630
Worker	0.1168	0.0883	0.9043	2.5600e-003	0.2783	1.8100e-003	0.2801	0.0739	1.6700e-003	0.0756	0.0000	230.9327	230.9327	6.4600e-003	0.0000	231.0943
Total	**0.1432**	**1.0550**	**1.1010**	**5.2000e-003**	**0.3409**	**3.4700e-003**	**0.3444**	**0.0920**	**3.2600e-003**	**0.0953**	**0.0000**	**483.2707**	**483.2707**	**0.0235**	**0.0000**	**483.8573**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	6.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	6.9200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0195**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6612					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9200e-003	0.0204	0.0242	4.0000e-005		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	3.4043	3.4043	2.3000e-004	0.0000	3.4102
Total	**0.6641**	**0.0204**	**0.0242**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.2500e-003**	**1.2500e-003**	**0.0000**	**3.4043**	**3.4043**	**2.3000e-004**	**0.0000**	**3.4102**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1600e-003	1.6400e-003	0.0168	5.0000e-005	5.1500e-003	3.0000e-005	5.1900e-003	1.3700e-003	3.0000e-005	1.4000e-003	0.0000	4.2765	4.2765	1.2000e-004	0.0000	4.2795
Total	**2.1600e-003**	**1.6400e-003**	**0.0168**	**5.0000e-005**	**5.1500e-003**	**3.0000e-005**	**5.1900e-003**	**1.3700e-003**	**3.0000e-005**	**1.4000e-003**	**0.0000**	**4.2765**	**4.2765**	**1.2000e-004**	**0.0000**	**4.2795**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6612					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9200e-003	0.0204	0.0242	4.0000e-005		1.2500e-003	1.2500e-003		1.2500e-003	1.2500e-003	0.0000	3.4043	3.4043	2.3000e-004	0.0000	3.4102
Total	**0.6641**	**0.0204**	**0.0242**	**4.0000e-005**		**1.2500e-003**	**1.2500e-003**		**1.2500e-003**	**1.2500e-003**	**0.0000**	**3.4043**	**3.4043**	**2.3000e-004**	**0.0000**	**3.4102**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1600e-003	1.6400e-003	0.0168	5.0000e-005	5.1500e-003	3.0000e-005	5.1900e-003	1.3700e-003	3.0000e-005	1.4000e-003	0.0000	4.2765	4.2765	1.2000e-004	0.0000	4.2795
Total	**2.1600e-003**	**1.6400e-003**	**0.0168**	**5.0000e-005**	**5.1500e-003**	**3.0000e-005**	**5.1900e-003**	**1.3700e-003**	**3.0000e-005**	**1.4000e-003**	**0.0000**	**4.2765**	**4.2765**	**1.2000e-004**	**0.0000**	**4.2795**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Industrial Park	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Other Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					
Mitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Unmitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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:

CALEEMOD ANNUAL OPERATIONAL (PASSENGER CARS) EMISSIONS MODEL OUTPUTS

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East End and County Industrial (Operations - Passenger Cars)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	55.53	1000sqft	1.27	55,534.00	0
Unrefrigerated Warehouse-No Rail	212.25	1000sqft	4.87	212,251.00	0
Other Asphalt Surfaces	133.67	1000sqft	3.07	133,673.00	0
Other Non-Asphalt Surfaces	62.09	1000sqft	1.43	62,086.00	0
Parking Lot	241.00	Space	2.21	96,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

East End and County Industrial (Operations - Passenger Cars) - San Bernardino-South Coast County, Annual

Project Characteristics -

Land Use - Based on the Site Plan, the Total Project Area is 12.85 acres.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Characteristics are consistent with the information provided in the East End and County Industrial Traffic Impact Analysis (Urban Crossroads, Inc.)

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Fleet Mix - Passenger Car Fleet Mix estimated based on the ratio of the vehicle classes in CalEEMod default fleet mix.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	LightingElect	3.66	2.56
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	3.07	2.15
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	3.47	2.43
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.06	0.00
tblFleetMix	HHD	0.06	0.00
tblFleetMix	LDA	0.55	0.62
tblFleetMix	LDA	0.55	0.62
tblFleetMix	LDT1	0.04	0.04

tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.20
tblFleetMix	LDT2	0.18	0.20
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	MCY	6.0000e-003	0.00
tblFleetMix	MCY	6.0000e-003	0.00
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblLandUse	LotAcreage	2.17	2.21
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG

East End and County Industrial (Operations - Passenger Cars) - San Bernardino-South Coast County, Annual

tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblVehicleEF	HHD	1.24	0.03
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	3.46	7.82
tblVehicleEF	HHD	0.58	0.51
tblVehicleEF	HHD	1.92	2.4420e-003
tblVehicleEF	HHD	6,983.95	1,459.93
tblVehicleEF	HHD	1,493.95	1,411.06
tblVehicleEF	HHD	5.71	0.02
tblVehicleEF	HHD	28.07	7.65
tblVehicleEF	HHD	2.87	3.24
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.9170e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	9.3000e-005	4.0000e-006
tblVehicleEF	HHD	3.4490e-003	1.2600e-004
tblVehicleEF	HHD	0.89	0.60

tblVehicleEF	HHD	5.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	2.4200e-004	6.3700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.07	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.3000e-005	4.0000e-006
tblVehicleEF	HHD	3.4490e-003	1.2600e-004
tblVehicleEF	HHD	1.02	0.68
tblVehicleEF	HHD	5.7000e-005	2.0000e-006
tblVehicleEF	HHD	0.13	0.16
tblVehicleEF	HHD	2.4200e-004	6.3700e-004
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	HHD	1.17	0.03
tblVehicleEF	HHD	0.04	0.06
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	2.52	7.65
tblVehicleEF	HHD	0.58	0.51
tblVehicleEF	HHD	1.80	2.2950e-003
tblVehicleEF	HHD	7,395.94	1,453.32
tblVehicleEF	HHD	1,493.95	1,411.06
tblVehicleEF	HHD	5.71	0.02
tblVehicleEF	HHD	28.97	7.40
tblVehicleEF	HHD	2.70	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06

tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.9170e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	1.8400e-004	9.0000e-006
tblVehicleEF	HHD	3.9090e-003	1.4800e-004
tblVehicleEF	HHD	0.84	0.62
tblVehicleEF	HHD	1.2900e-004	6.0000e-006
tblVehicleEF	HHD	0.09	0.09
tblVehicleEF	HHD	2.4800e-004	6.5700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.07	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	0.00
tblVehicleEF	HHD	1.8400e-004	9.0000e-006
tblVehicleEF	HHD	3.9090e-003	1.4800e-004
tblVehicleEF	HHD	0.97	0.71
tblVehicleEF	HHD	1.2900e-004	6.0000e-006
tblVehicleEF	HHD	0.13	0.16
tblVehicleEF	HHD	2.4800e-004	6.5700e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	1.34	0.03
tblVehicleEF	HHD	0.04	3.7740e-003

tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	4.76	7.98
tblVehicleEF	HHD	0.58	0.36
tblVehicleEF	HHD	1.89	2.4140e-003
tblVehicleEF	HHD	6,415.00	1,454.79
tblVehicleEF	HHD	1,493.95	1,371.01
tblVehicleEF	HHD	5.71	0.02
tblVehicleEF	HHD	26.84	7.90
tblVehicleEF	HHD	2.83	3.15
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	1.0000e-006
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8160e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	1.0000e-006
tblVehicleEF	HHD	9.4000e-005	4.0000e-006
tblVehicleEF	HHD	3.7830e-003	1.4900e-004
tblVehicleEF	HHD	0.96	0.56
tblVehicleEF	HHD	5.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	2.5900e-004	6.6600e-004
tblVehicleEF	HHD	0.06	1.0000e-006
tblVehicleEF	HHD	0.06	0.01

tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.4000e-005	4.0000e-006
tblVehicleEF	HHD	3.7830e-003	1.4900e-004
tblVehicleEF	HHD	1.10	0.64
tblVehicleEF	HHD	5.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.13	0.09
tblVehicleEF	HHD	2.5900e-004	6.6600e-004
tblVehicleEF	HHD	0.07	1.0000e-006
tblVehicleEF	LDA	4.6640e-003	2.7950e-003
tblVehicleEF	LDA	6.4640e-003	0.06
tblVehicleEF	LDA	0.62	0.70
tblVehicleEF	LDA	1.32	2.22
tblVehicleEF	LDA	261.85	269.33
tblVehicleEF	LDA	59.28	55.48
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.25
tblVehicleEF	LDA	2.6230e-003	2.6640e-003

tblVehicleEF	LDA	6.1500e-004	5.4900e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27
tblVehicleEF	LDA	5.3170e-003	3.2030e-003
tblVehicleEF	LDA	5.3900e-003	0.05
tblVehicleEF	LDA	0.76	0.86
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tblVehicleEF	LDA	286.52	294.16
tblVehicleEF	LDA	59.28	54.75
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.13	0.13
tblVehicleEF	LDA	0.08	0.11
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.8710e-003	2.9100e-003
tblVehicleEF	LDA	6.1100e-004	5.4200e-004
tblVehicleEF	LDA	0.10	0.14

tblVehicleEF	LDA	0.13	0.13
tblVehicleEF	LDA	0.08	0.11
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	4.5320e-003	2.7260e-003
tblVehicleEF	LDA	6.4200e-003	0.06
tblVehicleEF	LDA	0.58	0.67
tblVehicleEF	LDA	1.30	2.19
tblVehicleEF	LDA	256.02	263.51
tblVehicleEF	LDA	59.28	55.41
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.7130e-003	1.5260e-003
tblVehicleEF	LDA	2.3020e-003	1.9470e-003
tblVehicleEF	LDA	1.5790e-003	1.4050e-003
tblVehicleEF	LDA	2.1170e-003	1.7910e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.25
tblVehicleEF	LDA	2.5640e-003	2.6070e-003
tblVehicleEF	LDA	6.1500e-004	5.4800e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.05

tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.1890e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.63
tblVehicleEF	LDT1	4.02	2.54
tblVehicleEF	LDT1	323.73	319.09
tblVehicleEF	LDT1	72.77	67.44
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003
tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003
tblVehicleEF	LDT1	0.19	0.21
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.29	0.48
tblVehicleEF	LDT1	3.2600e-003	3.1580e-003
tblVehicleEF	LDT1	7.9900e-004	6.6700e-004
tblVehicleEF	LDT1	0.19	0.21
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.21	0.95

tblVehicleEF	LDT1	0.31	0.53
tblVehicleEF	LDT1	0.02	9.2860e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	2.05	1.97
tblVehicleEF	LDT1	3.30	2.10
tblVehicleEF	LDT1	352.65	345.09
tblVehicleEF	LDT1	72.77	66.47
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003
tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003
tblVehicleEF	LDT1	0.40	0.44
tblVehicleEF	LDT1	0.44	0.36
tblVehicleEF	LDT1	0.29	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4150e-003
tblVehicleEF	LDT1	7.8600e-004	6.5800e-004
tblVehicleEF	LDT1	0.40	0.44
tblVehicleEF	LDT1	0.44	0.36
tblVehicleEF	LDT1	0.29	0.32
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.95
tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	7.9980e-003

tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.62	1.55
tblVehicleEF	LDT1	3.95	2.49
tblVehicleEF	LDT1	316.91	312.93
tblVehicleEF	LDT1	72.77	67.36
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	2.8630e-003	2.4040e-003
tblVehicleEF	LDT1	3.8930e-003	3.0870e-003
tblVehicleEF	LDT1	2.6370e-003	2.2130e-003
tblVehicleEF	LDT1	3.5800e-003	2.8380e-003
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.0970e-003
tblVehicleEF	LDT1	7.9800e-004	6.6700e-004
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.31	0.53
tblVehicleEF	LDT2	6.9330e-003	4.8260e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.06

tblVehicleEF	LDT2	1.85	2.89
tblVehicleEF	LDT2	363.70	344.02
tblVehicleEF	LDT2	81.97	72.94
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.13	0.38
tblVehicleEF	LDT2	3.6440e-003	3.4040e-003
tblVehicleEF	LDT2	8.5100e-004	7.2200e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.14	0.42
tblVehicleEF	LDT2	7.8730e-003	5.5090e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.30
tblVehicleEF	LDT2	1.53	2.39
tblVehicleEF	LDT2	397.09	369.57

tblVehicleEF	LDT2	81.97	71.94
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LDT2	3.9810e-003	3.6570e-003
tblVehicleEF	LDT2	8.4600e-004	7.1200e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.11	0.35
tblVehicleEF	LDT2	6.7430e-003	4.7100e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.01
tblVehicleEF	LDT2	1.82	2.84
tblVehicleEF	LDT2	355.82	337.97
tblVehicleEF	LDT2	81.97	72.85
tblVehicleEF	LDT2	0.09	0.10

tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.12	0.38
tblVehicleEF	LDT2	3.5650e-003	3.3440e-003
tblVehicleEF	LDT2	8.5100e-004	7.2100e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.14	0.41
tblVehicleEF	LHD1	5.4860e-003	4.9840e-003
tblVehicleEF	LHD1	0.01	7.1410e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.77	1.07
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.99

tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.26	1.69
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6200e-004	1.0900e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.31	0.09

tblVehicleEF	LHD1	5.4860e-003	5.0000e-003
tblVehicleEF	LHD1	0.01	7.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.18	0.99
tblVehicleEF	LHD1	2.58	1.00
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.98
tblVehicleEF	LHD1	30.92	10.87
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.12	1.58
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005

tblVehicleEF	LHD1	6.0370e-003	6.3960e-003
tblVehicleEF	LHD1	3.5800e-004	1.0800e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.30	0.09
tblVehicleEF	LHD1	5.4860e-003	4.9870e-003
tblVehicleEF	LHD1	0.01	7.1590e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.72	1.05
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.96
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.22	1.66
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6100e-004	1.0800e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.8190e-003	3.4060e-003
tblVehicleEF	LHD2	5.2410e-003	4.5240e-003
tblVehicleEF	LHD2	9.1660e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61
tblVehicleEF	LHD2	1.29	0.64
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.51
tblVehicleEF	LHD2	24.89	7.96

tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.69	1.81
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7300e-004	7.9000e-005
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4160e-003

tblVehicleEF	LHD2	5.3190e-003	4.5750e-003
tblVehicleEF	LHD2	8.7380e-003	9.6870e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.56	0.62
tblVehicleEF	LHD2	1.21	0.60
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.89
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.59	1.70
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7100e-004	7.8000e-005

tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4070e-003
tblVehicleEF	LHD2	5.2490e-003	4.5300e-003
tblVehicleEF	LHD2	9.0820e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61
tblVehicleEF	LHD2	1.27	0.63
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.94
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.67	1.78
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003

tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7200e-004	7.9000e-005
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.42	0.33
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	21.02	21.16
tblVehicleEF	MCY	9.91	8.77
tblVehicleEF	MCY	167.12	211.16
tblVehicleEF	MCY	46.87	61.87
tblVehicleEF	MCY	1.17	1.17
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.45	1.44

tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.26	2.26
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.17	1.92
tblVehicleEF	MCY	2.0790e-003	2.0900e-003
tblVehicleEF	MCY	6.9500e-004	6.1200e-004
tblVehicleEF	MCY	1.45	1.44
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.76	2.76
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.37	2.08
tblVehicleEF	MCY	0.41	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	21.14	21.29
tblVehicleEF	MCY	9.06	7.97
tblVehicleEF	MCY	167.12	211.14
tblVehicleEF	MCY	46.87	59.68
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12

tblVehicleEF	MCY	2.19	2.19
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	1.87	1.64
tblVehicleEF	MCY	2.0790e-003	2.0890e-003
tblVehicleEF	MCY	6.7100e-004	5.9100e-004
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12
tblVehicleEF	MCY	2.69	2.68
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.03	1.78
tblVehicleEF	MCY	0.42	0.33
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	20.18
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	209.47
tblVehicleEF	MCY	46.87	61.06
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.22	2.22
tblVehicleEF	MCY	0.57	2.38

tblVehicleEF	MCY	2.10	1.84
tblVehicleEF	MCY	2.0630e-003	2.0730e-003
tblVehicleEF	MCY	6.8600e-004	6.0400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.71	2.71
tblVehicleEF	MCY	0.57	2.38
tblVehicleEF	MCY	2.28	2.00
tblVehicleEF	MDV	0.01	6.6050e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.33
tblVehicleEF	MDV	3.59	3.53
tblVehicleEF	MDV	498.66	425.70
tblVehicleEF	MDV	110.76	90.07
tblVehicleEF	MDV	0.20	0.14
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MDV	5.0000e-003	4.2090e-003

tblVehicleEF	MDV	1.1710e-003	8.9100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MDV	0.02	7.4780e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.60
tblVehicleEF	MDV	2.99	2.92
tblVehicleEF	MDV	542.90	452.84
tblVehicleEF	MDV	110.76	88.84
tblVehicleEF	MDV	0.18	0.12
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.21	0.25
tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.24	0.42
tblVehicleEF	MDV	5.4470e-003	4.4780e-003
tblVehicleEF	MDV	1.1600e-003	8.7900e-004
tblVehicleEF	MDV	0.21	0.25

tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.26	0.46
tblVehicleEF	MDV	0.01	6.4310e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.47
tblVehicleEF	MDV	488.33	419.25
tblVehicleEF	MDV	110.76	89.97
tblVehicleEF	MDV	0.19	0.13
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.28	0.49
tblVehicleEF	MDV	4.8960e-003	4.1450e-003
tblVehicleEF	MDV	1.1700e-003	8.9000e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.60	0.37
tblVehicleEF	MH	6.96	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.64	4.70
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15
tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.2000e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00

tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.44	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.74	0.37
tblVehicleEF	MH	6.31	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.50	4.42
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15
tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.0900e-004	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00

tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.41	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.61	0.37
tblVehicleEF	MH	6.87	0.00
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tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.61	4.62
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15
tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.00
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.1900e-004	0.00
tblVehicleEF	MH	1.88	0.00
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00

tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.43	0.00
tblVehicleEF	MHD	0.02	3.2250e-003
tblVehicleEF	MHD	4.1450e-003	6.0340e-003
tblVehicleEF	MHD	0.06	8.8310e-003
tblVehicleEF	MHD	0.33	0.34
tblVehicleEF	MHD	0.31	0.55
tblVehicleEF	MHD	6.00	1.03
tblVehicleEF	MHD	155.10	71.06
tblVehicleEF	MHD	1,105.72	1,029.53
tblVehicleEF	MHD	53.92	8.43
tblVehicleEF	MHD	0.63	0.61
tblVehicleEF	MHD	1.08	2.22
tblVehicleEF	MHD	4.3700e-004	2.0190e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	4.1800e-004	1.9320e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.05

tblVehicleEF	MHD	1.4910e-003	6.7400e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.4400e-004	8.3000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
tblVehicleEF	MHD	0.05	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	3.0610e-003
tblVehicleEF	MHD	4.2290e-003	6.0860e-003
tblVehicleEF	MHD	0.05	8.4200e-003
tblVehicleEF	MHD	0.24	0.28
tblVehicleEF	MHD	0.32	0.56
tblVehicleEF	MHD	5.61	0.96
tblVehicleEF	MHD	164.29	72.29
tblVehicleEF	MHD	1,105.72	1,029.54
tblVehicleEF	MHD	53.92	8.32
tblVehicleEF	MHD	0.65	0.62
tblVehicleEF	MHD	1.01	2.09
tblVehicleEF	MHD	3.6900e-004	1.7050e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	3.5300e-004	1.6310e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005

tblVehicleEF	MHD	2.8480e-003	1.3100e-003
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.35	0.04
tblVehicleEF	MHD	1.5770e-003	6.8600e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.3800e-004	8.2000e-005
tblVehicleEF	MHD	2.8480e-003	1.3100e-003
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
tblVehicleEF	MHD	0.05	0.12
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.38	0.05
tblVehicleEF	MHD	0.02	3.4660e-003
tblVehicleEF	MHD	4.1530e-003	6.0380e-003
tblVehicleEF	MHD	0.06	8.7320e-003
tblVehicleEF	MHD	0.46	0.42
tblVehicleEF	MHD	0.31	0.55
tblVehicleEF	MHD	5.90	1.02
tblVehicleEF	MHD	142.41	69.34
tblVehicleEF	MHD	1,105.72	1,029.53
tblVehicleEF	MHD	53.92	8.40
tblVehicleEF	MHD	0.60	0.60

tblVehicleEF	MHD	1.06	2.18
tblVehicleEF	MHD	5.3200e-004	2.4540e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	5.0900e-004	2.3480e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	1.5800e-003	7.2800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.36	0.05
tblVehicleEF	MHD	1.3710e-003	6.5800e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.4300e-004	8.3000e-005
tblVehicleEF	MHD	1.5800e-003	7.2800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
tblVehicleEF	MHD	0.05	0.12
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	OBUS	0.01	9.3650e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.03

tblVehicleEF	OBUS	0.27	0.49
tblVehicleEF	OBUS	0.73	1.19
tblVehicleEF	OBUS	6.67	2.81
tblVehicleEF	OBUS	70.21	68.33
tblVehicleEF	OBUS	1,126.32	1,507.23
tblVehicleEF	OBUS	71.08	22.19
tblVehicleEF	OBUS	0.32	0.39
tblVehicleEF	OBUS	1.10	1.47
tblVehicleEF	OBUS	1.1300e-004	1.5090e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	1.0800e-004	1.4440e-003
tblVehicleEF	OBUS	5.1650e-003	0.02
tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	2.2350e-003	2.8130e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.41	0.13
tblVehicleEF	OBUS	6.8200e-004	6.5300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	2.2000e-004
tblVehicleEF	OBUS	2.2350e-003	2.8130e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07

tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.45	0.15
tblVehicleEF	OBUS	0.01	9.3930e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.47
tblVehicleEF	OBUS	0.75	1.22
tblVehicleEF	OBUS	6.11	2.57
tblVehicleEF	OBUS	73.34	68.71
tblVehicleEF	OBUS	1,126.32	1,507.28
tblVehicleEF	OBUS	71.08	21.80
tblVehicleEF	OBUS	0.33	0.39
tblVehicleEF	OBUS	1.02	1.35
tblVehicleEF	OBUS	9.5000e-005	1.2750e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	9.1000e-005	1.2200e-003
tblVehicleEF	OBUS	5.1650e-003	0.02
tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	4.3510e-003	5.4910e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	2.1830e-003	2.6560e-003
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.31

tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	7.1200e-004	6.5600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1800e-004	2.1600e-004
tblVehicleEF	OBUS	4.3510e-003	5.4910e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	2.1830e-003	2.6560e-003
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	9.3640e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.28	0.51
tblVehicleEF	OBUS	0.73	1.19
tblVehicleEF	OBUS	6.62	2.79
tblVehicleEF	OBUS	65.88	67.80
tblVehicleEF	OBUS	1,126.32	1,507.24
tblVehicleEF	OBUS	71.08	22.15
tblVehicleEF	OBUS	0.31	0.39
tblVehicleEF	OBUS	1.08	1.44
tblVehicleEF	OBUS	1.3700e-004	1.8320e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	1.3100e-004	1.7520e-003
tblVehicleEF	OBUS	5.1650e-003	0.02

tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	2.3980e-003	3.0600e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.5900e-004	1.1590e-003
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.05	0.33
tblVehicleEF	OBUS	0.41	0.13
tblVehicleEF	OBUS	6.4100e-004	6.4800e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2700e-004	2.1900e-004
tblVehicleEF	OBUS	2.3980e-003	3.0600e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.5900e-004	1.1590e-003
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.33
tblVehicleEF	OBUS	0.45	0.15
tblVehicleEF	SBUS	0.86	0.04
tblVehicleEF	SBUS	0.01	7.3980e-003
tblVehicleEF	SBUS	0.07	3.9120e-003
tblVehicleEF	SBUS	5.64	1.82
tblVehicleEF	SBUS	0.71	0.62
tblVehicleEF	SBUS	5.49	0.54
tblVehicleEF	SBUS	1,270.71	336.96
tblVehicleEF	SBUS	1,144.20	1,143.56
tblVehicleEF	SBUS	36.06	3.11

tblVehicleEF	SBUS	12.46	3.45
tblVehicleEF	SBUS	5.17	5.36
tblVehicleEF	SBUS	0.01	4.4720e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.0600e-004	3.0000e-005
tblVehicleEF	SBUS	0.01	4.2790e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
tblVehicleEF	SBUS	3.0740e-003	7.7800e-004
tblVehicleEF	SBUS	0.02	5.7810e-003
tblVehicleEF	SBUS	0.68	0.19
tblVehicleEF	SBUS	1.3130e-003	3.5100e-004
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.28	0.02
tblVehicleEF	SBUS	0.01	3.2020e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	3.1000e-005
tblVehicleEF	SBUS	3.0740e-003	7.7800e-004
tblVehicleEF	SBUS	0.02	5.7810e-003
tblVehicleEF	SBUS	0.97	0.27
tblVehicleEF	SBUS	1.3130e-003	3.5100e-004
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.31	0.02

tblVehicleEF	SBUS	0.86	0.04
tblVehicleEF	SBUS	0.01	7.4900e-003
tblVehicleEF	SBUS	0.06	3.2450e-003
tblVehicleEF	SBUS	5.48	1.78
tblVehicleEF	SBUS	0.72	0.64
tblVehicleEF	SBUS	3.76	0.38
tblVehicleEF	SBUS	1,335.64	345.46
tblVehicleEF	SBUS	1,144.20	1,143.58
tblVehicleEF	SBUS	36.06	2.85
tblVehicleEF	SBUS	12.86	3.52
tblVehicleEF	SBUS	4.84	5.03
tblVehicleEF	SBUS	0.01	3.7780e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.0600e-004	3.0000e-005
tblVehicleEF	SBUS	0.01	3.6140e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
tblVehicleEF	SBUS	5.9210e-003	1.3950e-003
tblVehicleEF	SBUS	0.02	6.1530e-003
tblVehicleEF	SBUS	0.67	0.19
tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	9.6420e-003	0.04
tblVehicleEF	SBUS	0.23	0.02
tblVehicleEF	SBUS	0.01	3.2820e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	2.8000e-005
tblVehicleEF	SBUS	5.9210e-003	1.3950e-003
tblVehicleEF	SBUS	0.02	6.1530e-003
tblVehicleEF	SBUS	0.96	0.27
tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	9.6420e-003	0.04
tblVehicleEF	SBUS	0.25	0.02
tblVehicleEF	SBUS	0.86	0.04
tblVehicleEF	SBUS	0.01	7.3930e-003
tblVehicleEF	SBUS	0.07	4.0100e-003
tblVehicleEF	SBUS	5.85	1.87
tblVehicleEF	SBUS	0.71	0.62
tblVehicleEF	SBUS	5.54	0.56
tblVehicleEF	SBUS	1,181.05	325.23
tblVehicleEF	SBUS	1,144.20	1,143.56
tblVehicleEF	SBUS	36.06	3.14
tblVehicleEF	SBUS	11.91	3.35
tblVehicleEF	SBUS	5.09	5.28
tblVehicleEF	SBUS	0.02	5.4310e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.0600e-004	3.0000e-005
tblVehicleEF	SBUS	0.02	5.1960e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03

tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
tblVehicleEF	SBUS	3.2090e-003	7.9400e-004
tblVehicleEF	SBUS	0.02	6.3370e-003
tblVehicleEF	SBUS	0.68	0.19
tblVehicleEF	SBUS	1.2980e-003	3.6100e-004
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.29	0.02
tblVehicleEF	SBUS	0.01	3.0910e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	3.1000e-005
tblVehicleEF	SBUS	3.2090e-003	7.9400e-004
tblVehicleEF	SBUS	0.02	6.3370e-003
tblVehicleEF	SBUS	0.97	0.27
tblVehicleEF	SBUS	1.2980e-003	3.6100e-004
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.32	0.03
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	9.79	32.64
tblVehicleEF	UBUS	14.93	1.46
tblVehicleEF	UBUS	1,861.83	1,734.35
tblVehicleEF	UBUS	135.15	17.41
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03

tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	8.4220e-003	1.6730e-003
tblVehicleEF	UBUS	0.12	0.01
tblVehicleEF	UBUS	4.0730e-003	7.0000e-004
tblVehicleEF	UBUS	0.66	0.06
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.19	0.07
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.6230e-003	1.7200e-004
tblVehicleEF	UBUS	8.4220e-003	1.6730e-003
tblVehicleEF	UBUS	0.12	0.01
tblVehicleEF	UBUS	4.0730e-003	7.0000e-004
tblVehicleEF	UBUS	2.68	4.28
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.30	0.08
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	9.90	32.64
tblVehicleEF	UBUS	12.23	1.20
tblVehicleEF	UBUS	1,861.83	1,734.35
tblVehicleEF	UBUS	135.15	16.98
tblVehicleEF	UBUS	5.98	0.38

tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	0.02	3.2040e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	9.6640e-003	1.6440e-003
tblVehicleEF	UBUS	0.67	0.06
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.06
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.5760e-003	1.6800e-004
tblVehicleEF	UBUS	0.02	3.2040e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	9.6640e-003	1.6440e-003
tblVehicleEF	UBUS	2.69	4.28
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.16	0.07
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	9.80	32.64
tblVehicleEF	UBUS	14.43	1.42
tblVehicleEF	UBUS	1,861.83	1,734.35

tblVehicleEF	UBUS	135.15	17.36
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	0.66	0.06
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.6140e-003	1.7200e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	2.68	4.28
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.28	0.08
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	79.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.49	2.21
tblVehicleTrips	ST_TR	1.68	1.75
tblVehicleTrips	SU_TR	0.73	1.08
tblVehicleTrips	SU_TR	1.68	1.75
tblVehicleTrips	WD_TR	6.83	2.95
tblVehicleTrips	WD_TR	1.68	1.75

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	295.3486	295.3486	0.0117	2.7500e-003	296.4606
Mobile	0.2567	0.2822	3.6089	0.0106	1.1600	5.9200e-003	1.1659	0.3080	5.4500e-003	0.3134	0.0000	968.6014	968.6014	0.0250	0.0000	969.2260
Offroad	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Waste						0.0000	0.0000		0.0000	0.0000	54.4767	0.0000	54.4767	3.2195	0.0000	134.9637
Water						0.0000	0.0000		0.0000	0.0000	19.6457	256.9089	276.5546	2.0284	0.0498	342.1167
Total	**1.4743**	**1.4324**	**4.2010**	**0.0130**	**1.1600**	**0.0457**	**1.2057**	**0.3080**	**0.0422**	**0.3501**	**74.1224**	**1,724.2387**	**1,798.3610**	**5.3504**	**0.0526**	**1,947.7922**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	295.3486	295.3486	0.0117	2.7500e-003	296.4606
Mobile	0.2567	0.2822	3.6089	0.0106	1.1600	5.9200e-003	1.1659	0.3080	5.4500e-003	0.3134	0.0000	968.6014	968.6014	0.0250	0.0000	969.2260
Offroad	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Waste						0.0000	0.0000		0.0000	0.0000	54.4767	0.0000	54.4767	3.2195	0.0000	134.9637
Water						0.0000	0.0000		0.0000	0.0000	19.6457	256.9089	276.5546	2.0284	0.0498	342.1167
Total	**1.4743**	**1.4324**	**4.2010**	**0.0130**	**1.1600**	**0.0457**	**1.2057**	**0.3080**	**0.0422**	**0.3501**	**74.1224**	**1,724.2387**	**1,798.3610**	**5.3504**	**0.0526**	**1,947.7922**

	ROG	NOx	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	Demolition	Demolition	6/1/2020	6/1/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 6.71

Residential Indoor: 0; Residential Outdoor: 0; 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
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2567	0.2822	3.6089	0.0106	1.1600	5.9200e-003	1.1659	0.3080	5.4500e-003	0.3134	0.0000	968.6014	968.6014	0.0250	0.0000	969.2260
Unmitigated	0.2567	0.2822	3.6089	0.0106	1.1600	5.9200e-003	1.1659	0.3080	5.4500e-003	0.3134	0.0000	968.6014	968.6014	0.0250	0.0000	969.2260

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	164.00	122.72	59.91	865,463	865,463
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	371.99	371.99	371.99	2,247,719	2,247,719
Total	535.99	494.72	431.90	3,113,182	3,113,182

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
Industrial Park	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.620600	0.041900	0.202700	0.134800	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.620600	0.041900	0.202700	0.134800	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

East End and County Industrial (Operations - Passenger Cars) - San Bernardino-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	271.9504	271.9504	0.0112	2.3200e-003	272.9233
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	271.9504	271.9504	0.0112	2.3200e-003	272.9233
NaturalGas Mitigated	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3982	23.3982	4.5000e-004	4.3000e-004	23.5373
NaturalGas Unmitigated	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3982	23.3982	4.5000e-004	4.3000e-004	23.5373

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	134948	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2013	7.2013	1.4000e-004	1.3000e-004	7.2441
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	303519	1.6400e-003	0.0149	0.0125	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1969	16.1969	3.1000e-004	3.0000e-004	16.2932
Total		**2.3700e-003**	**0.0215**	**0.0181**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3983**	**23.3983**	**4.5000e-004**	**4.3000e-004**	**23.5373**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	134948	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2013	7.2013	1.4000e-004	1.3000e-004	7.2441
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	303519	1.6400e-003	0.0149	0.0125	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1969	16.1969	3.1000e-004	3.0000e-004	16.2932
Total		**2.3700e-003**	**0.0215**	**0.0181**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3983**	**23.3983**	**4.5000e-004**	**4.3000e-004**	**23.5373**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	416505	132.7074	5.4800e-003	1.1300e-003	133.1822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Unrefrigerated Warehouse-No Rail	403277	128.4927	5.3000e-003	1.1000e-003	128.9524
Total		**271.9504**	**0.0112**	**2.3200e-003**	**272.9233**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	416505	132.7074	5.4800e-003	1.1300e-003	133.1822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Unrefrigerated Warehouse-No Rail	403277	128.4927	5.3000e-003	1.1000e-003	128.9524
Total		**271.9504**	**0.0112**	**2.3200e-003**	**272.9233**

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	tons/yr										MT/yr					
Mitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Unmitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	276.5546	2.0284	0.0498	342.1167
Unmitigated	276.5546	2.0284	0.0498	342.1167

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	12.8413 / 0	57.3496	0.4206	0.0103	70.9453
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	49.0828 / 0	219.2050	1.6078	0.0395	271.1714
Total		**276.5546**	**2.0284**	**0.0498**	**342.1168**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	12.8413 / 0	57.3496	0.4206	0.0103	70.9453
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	49.0828 / 0	219.2050	1.6078	0.0395	271.1714
Total		**276.5546**	**2.0284**	**0.0498**	**342.1168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	54.4767	3.2195	0.0000	134.9637
Unmitigated	54.4767	3.2195	0.0000	134.9637

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	68.86	13.9780	0.8261	0.0000	34.6298
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	199.51	40.4987	2.3934	0.0000	100.3339
Total		**54.4767**	**3.2195**	**0.0000**	**134.9637**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	68.86	13.9780	0.8261	0.0000	34.6298
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	199.51	40.4987	2.3934	0.0000	100.3339
Total		**54.4767**	**3.2195**	**0.0000**	**134.9637**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	4	4.00	365	200	0.37	CNG

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/Backhoes	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Total	**0.0998**	**1.1286**	**0.5650**	**2.3200e-003**		**0.0381**	**0.0381**		**0.0351**	**0.0351**	**0.0000**	**203.3622**	**203.3622**	**0.0658**	**0.0000**	**205.0065**

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 3.3:

CALEEMOD ANNUAL OPERATIONAL (TRUCKS) EMISSIONS MODEL OUTPUTS

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East End and County Industrial (Operations - Trucks)

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	55.53	1000sqft	1.27	55,534.00	0
Unrefrigerated Warehouse-No Rail	212.25	1000sqft	4.87	212,251.00	0
Other Asphalt Surfaces	133.67	1000sqft	3.07	133,673.00	0
Other Non-Asphalt Surfaces	62.09	1000sqft	1.43	62,086.00	0
Parking Lot	241.00	Space	2.21	96,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

East End and County Industrial (Operations - Trucks) - San Bernardino-South Coast County, Annual

Project Characteristics -

Land Use - Based on the Site Plan, the Total Project Area is 12.85 acres.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Characteristics are consistent with the information provided in the East End and County Industrial Traffic Impact Analysis (Urban Crossroads, Inc.)

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Operational Off-Road Equipment - Based on SCAQMD High Cube Warehouse Truck Trip Study White Paper Summary of Busniess Survey Results (2014)

Fleet Mix - Truck Fleet Mix estimated by rationing the Trip Rates for each truck type based on information provided in the TIA.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	LightingElect	3.66	2.56
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	3.07	2.15
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	3.47	2.43
tblEnergyUse	T24NG	2.00	1.40
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tblFleetMix	HHD	0.06	0.79
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tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00

tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.15
tblFleetMix	LHD1	0.02	0.11
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	MCY	6.0000e-003	0.00
tblFleetMix	MCY	6.0000e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.23
tblFleetMix	MHD	0.02	0.11
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblLandUse	LotAcreage	2.17	2.21
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG

East End and County Industrial (Operations - Trucks) - San Bernardino-South Coast County, Annual

tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
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tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.0970e-003
tblVehicleEF	LDT1	7.9800e-004	6.6700e-004
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.25	1.12
tblVehicleEF	LDT1	0.31	0.53
tblVehicleEF	LDT2	6.9330e-003	4.8260e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.06

tblVehicleEF	LDT2	1.85	2.89
tblVehicleEF	LDT2	363.70	344.02
tblVehicleEF	LDT2	81.97	72.94
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.13	0.38
tblVehicleEF	LDT2	3.6440e-003	3.4040e-003
tblVehicleEF	LDT2	8.5100e-004	7.2200e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.13	0.16
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.14	0.42
tblVehicleEF	LDT2	7.8730e-003	5.5090e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.30
tblVehicleEF	LDT2	1.53	2.39
tblVehicleEF	LDT2	397.09	369.57

tblVehicleEF	LDT2	81.97	71.94
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.10	0.32
tblVehicleEF	LDT2	3.9810e-003	3.6570e-003
tblVehicleEF	LDT2	8.4600e-004	7.1200e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.16	0.19
tblVehicleEF	LDT2	0.12	0.19
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.50
tblVehicleEF	LDT2	0.11	0.35
tblVehicleEF	LDT2	6.7430e-003	4.7100e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.01
tblVehicleEF	LDT2	1.82	2.84
tblVehicleEF	LDT2	355.82	337.97
tblVehicleEF	LDT2	81.97	72.85
tblVehicleEF	LDT2	0.09	0.10

tblVehicleEF	LDT2	1.7370e-003	1.5970e-003
tblVehicleEF	LDT2	2.4180e-003	2.0410e-003
tblVehicleEF	LDT2	1.5980e-003	1.4690e-003
tblVehicleEF	LDT2	2.2230e-003	1.8770e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.12	0.38
tblVehicleEF	LDT2	3.5650e-003	3.3440e-003
tblVehicleEF	LDT2	8.5100e-004	7.2100e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.58
tblVehicleEF	LDT2	0.14	0.41
tblVehicleEF	LHD1	5.4860e-003	4.9840e-003
tblVehicleEF	LHD1	0.01	7.1410e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.77	1.07
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.99

tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.26	1.69
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6200e-004	1.0900e-004
tblVehicleEF	LHD1	3.7970e-003	3.3360e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8480e-003	1.6030e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.62
tblVehicleEF	LHD1	0.31	0.09

tblVehicleEF	LHD1	5.4860e-003	5.0000e-003
tblVehicleEF	LHD1	0.01	7.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.18	0.99
tblVehicleEF	LHD1	2.58	1.00
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.98
tblVehicleEF	LHD1	30.92	10.87
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.12	1.58
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005

tblVehicleEF	LHD1	6.0370e-003	6.3960e-003
tblVehicleEF	LHD1	3.5800e-004	1.0800e-004
tblVehicleEF	LHD1	7.5090e-003	6.6400e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	4.2150e-003	3.7110e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.35	0.63
tblVehicleEF	LHD1	0.30	0.09
tblVehicleEF	LHD1	5.4860e-003	4.9870e-003
tblVehicleEF	LHD1	0.01	7.1590e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	1.16	0.97
tblVehicleEF	LHD1	2.72	1.05
tblVehicleEF	LHD1	9.23	9.41
tblVehicleEF	LHD1	614.92	656.94
tblVehicleEF	LHD1	30.92	10.96
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.22	1.66
tblVehicleEF	LHD1	9.6600e-004	9.4300e-004
tblVehicleEF	LHD1	0.01	9.9510e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.7600e-004
tblVehicleEF	LHD1	9.2400e-004	9.0200e-004
tblVehicleEF	LHD1	2.5280e-003	2.4880e-003
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	9.2600e-004	2.5400e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	9.1000e-005
tblVehicleEF	LHD1	6.0360e-003	6.3950e-003
tblVehicleEF	LHD1	3.6100e-004	1.0800e-004
tblVehicleEF	LHD1	4.1760e-003	3.7150e-003
tblVehicleEF	LHD1	0.13	0.11
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8200e-003	1.5810e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.38	0.67
tblVehicleEF	LHD1	0.31	0.09
tblVehicleEF	LHD2	3.8190e-003	3.4060e-003
tblVehicleEF	LHD2	5.2410e-003	4.5240e-003
tblVehicleEF	LHD2	9.1660e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61
tblVehicleEF	LHD2	1.29	0.64
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.51
tblVehicleEF	LHD2	24.89	7.96

tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.69	1.81
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7300e-004	7.9000e-005
tblVehicleEF	LHD2	1.4000e-003	1.6380e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.3800e-004	8.2600e-004
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4160e-003

tblVehicleEF	LHD2	5.3190e-003	4.5750e-003
tblVehicleEF	LHD2	8.7380e-003	9.6870e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.56	0.62
tblVehicleEF	LHD2	1.21	0.60
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.89
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.59	1.70
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7100e-004	7.8000e-005

tblVehicleEF	LHD2	2.7070e-003	3.1900e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.6130e-003	1.8380e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	3.4070e-003
tblVehicleEF	LHD2	5.2490e-003	4.5300e-003
tblVehicleEF	LHD2	9.0820e-003	0.01
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.55	0.61
tblVehicleEF	LHD2	1.27	0.63
tblVehicleEF	LHD2	14.32	14.63
tblVehicleEF	LHD2	614.63	657.52
tblVehicleEF	LHD2	24.89	7.94
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.67	1.78
tblVehicleEF	LHD2	1.3030e-003	1.3910e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.3300e-004
tblVehicleEF	LHD2	1.2470e-003	1.3310e-003
tblVehicleEF	LHD2	2.6810e-003	2.6890e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.2300e-004
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003

tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	5.9810e-003	6.3440e-003
tblVehicleEF	LHD2	2.7200e-004	7.9000e-005
tblVehicleEF	LHD2	1.4600e-003	1.7460e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.2300e-004	8.0700e-004
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.10	0.33
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.42	0.33
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	21.02	21.16
tblVehicleEF	MCY	9.91	8.77
tblVehicleEF	MCY	167.12	211.16
tblVehicleEF	MCY	46.87	61.87
tblVehicleEF	MCY	1.17	1.17
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.45	1.44

tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.26	2.26
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.17	1.92
tblVehicleEF	MCY	2.0790e-003	2.0900e-003
tblVehicleEF	MCY	6.9500e-004	6.1200e-004
tblVehicleEF	MCY	1.45	1.44
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.80	0.80
tblVehicleEF	MCY	2.76	2.76
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.37	2.08
tblVehicleEF	MCY	0.41	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	21.14	21.29
tblVehicleEF	MCY	9.06	7.97
tblVehicleEF	MCY	167.12	211.14
tblVehicleEF	MCY	46.87	59.68
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12

tblVehicleEF	MCY	2.19	2.19
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	1.87	1.64
tblVehicleEF	MCY	2.0790e-003	2.0890e-003
tblVehicleEF	MCY	6.7100e-004	5.9100e-004
tblVehicleEF	MCY	3.14	3.13
tblVehicleEF	MCY	1.28	1.28
tblVehicleEF	MCY	2.14	2.12
tblVehicleEF	MCY	2.69	2.68
tblVehicleEF	MCY	0.50	2.09
tblVehicleEF	MCY	2.03	1.78
tblVehicleEF	MCY	0.42	0.33
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	20.18
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	209.47
tblVehicleEF	MCY	46.87	61.06
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.8190e-003	1.7890e-003
tblVehicleEF	MCY	3.7460e-003	3.1050e-003
tblVehicleEF	MCY	1.7050e-003	1.6760e-003
tblVehicleEF	MCY	3.5370e-003	2.9300e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.22	2.22
tblVehicleEF	MCY	0.57	2.38

tblVehicleEF	MCY	2.10	1.84
tblVehicleEF	MCY	2.0630e-003	2.0730e-003
tblVehicleEF	MCY	6.8600e-004	6.0400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	1.14	1.12
tblVehicleEF	MCY	0.72	0.71
tblVehicleEF	MCY	2.71	2.71
tblVehicleEF	MCY	0.57	2.38
tblVehicleEF	MCY	2.28	2.00
tblVehicleEF	MDV	0.01	6.6050e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.33
tblVehicleEF	MDV	3.59	3.53
tblVehicleEF	MDV	498.66	425.70
tblVehicleEF	MDV	110.76	90.07
tblVehicleEF	MDV	0.20	0.14
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MDV	5.0000e-003	4.2090e-003

tblVehicleEF	MDV	1.1710e-003	8.9100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MDV	0.02	7.4780e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.60
tblVehicleEF	MDV	2.99	2.92
tblVehicleEF	MDV	542.90	452.84
tblVehicleEF	MDV	110.76	88.84
tblVehicleEF	MDV	0.18	0.12
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.21	0.25
tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.24	0.42
tblVehicleEF	MDV	5.4470e-003	4.4780e-003
tblVehicleEF	MDV	1.1600e-003	8.7900e-004
tblVehicleEF	MDV	0.21	0.25

tblVehicleEF	MDV	0.24	0.21
tblVehicleEF	MDV	0.18	0.22
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.53
tblVehicleEF	MDV	0.26	0.46
tblVehicleEF	MDV	0.01	6.4310e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.47
tblVehicleEF	MDV	488.33	419.25
tblVehicleEF	MDV	110.76	89.97
tblVehicleEF	MDV	0.19	0.13
tblVehicleEF	MDV	1.8680e-003	1.7260e-003
tblVehicleEF	MDV	2.5890e-003	2.1810e-003
tblVehicleEF	MDV	1.7240e-003	1.5930e-003
tblVehicleEF	MDV	2.3820e-003	2.0080e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.28	0.49
tblVehicleEF	MDV	4.8960e-003	4.1450e-003
tblVehicleEF	MDV	1.1700e-003	8.9000e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.61
tblVehicleEF	MDV	0.31	0.54
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.60	0.37
tblVehicleEF	MH	6.96	0.00
tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.64	4.70
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15
tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.2000e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.54	0.00

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tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.44	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
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tblVehicleEF	MH	1,048.28	958.86
tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.50	4.42
tblVehicleEF	MH	0.01	0.02
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tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.0900e-004	0.00
tblVehicleEF	MH	3.12	0.00
tblVehicleEF	MH	0.11	0.00
tblVehicleEF	MH	1.30	0.00

tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.41	0.00
tblVehicleEF	MH	0.04	3.8870e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	3.61	0.37
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tblVehicleEF	MH	59.91	0.00
tblVehicleEF	MH	1.61	4.62
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.15
tblVehicleEF	MH	1.2510e-003	0.00
tblVehicleEF	MH	3.2210e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.00
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00
tblVehicleEF	MH	0.12	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.40	0.00
tblVehicleEF	MH	0.01	9.0650e-003
tblVehicleEF	MH	7.1900e-004	0.00
tblVehicleEF	MH	1.88	0.00
tblVehicleEF	MH	0.12	0.00
tblVehicleEF	MH	0.56	0.00

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tblVehicleEF	MH	0.43	0.00
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tblVehicleEF	MHD	4.1800e-004	1.9320e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.05

tblVehicleEF	MHD	1.4910e-003	6.7400e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.4400e-004	8.3000e-005
tblVehicleEF	MHD	1.4330e-003	6.5800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	7.1400e-004	3.2600e-004
tblVehicleEF	MHD	0.05	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	3.0610e-003
tblVehicleEF	MHD	4.2290e-003	6.0860e-003
tblVehicleEF	MHD	0.05	8.4200e-003
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tblVehicleEF	MHD	0.32	0.56
tblVehicleEF	MHD	5.61	0.96
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tblVehicleEF	MHD	1,105.72	1,029.54
tblVehicleEF	MHD	53.92	8.32
tblVehicleEF	MHD	0.65	0.62
tblVehicleEF	MHD	1.01	2.09
tblVehicleEF	MHD	3.6900e-004	1.7050e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	3.5300e-004	1.6310e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005

tblVehicleEF	MHD	2.8480e-003	1.3100e-003
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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
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tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.35	0.04
tblVehicleEF	MHD	1.5770e-003	6.8600e-004
tblVehicleEF	MHD	0.01	9.8100e-003
tblVehicleEF	MHD	6.3800e-004	8.2000e-005
tblVehicleEF	MHD	2.8480e-003	1.3100e-003
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6690e-003	7.6600e-004
tblVehicleEF	MHD	0.05	0.12
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.38	0.05
tblVehicleEF	MHD	0.02	3.4660e-003
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tblVehicleEF	MHD	0.06	8.7320e-003
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tblVehicleEF	MHD	1.06	2.18
tblVehicleEF	MHD	5.3200e-004	2.4540e-003
tblVehicleEF	MHD	5.5780e-003	0.06
tblVehicleEF	MHD	8.2200e-004	1.0600e-004
tblVehicleEF	MHD	5.0900e-004	2.3480e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	9.7000e-005
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
tblVehicleEF	MHD	0.04	0.10
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.36	0.05
tblVehicleEF	MHD	1.3710e-003	6.5800e-004
tblVehicleEF	MHD	0.01	9.8100e-003
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tblVehicleEF	MHD	1.5800e-003	7.2800e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	7.0500e-004	3.2200e-004
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tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.03

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tblVehicleEF	OBUS	1,126.32	1,507.23
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tblVehicleEF	OBUS	1.1300e-004	1.5090e-003
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	1.0800e-004	1.4440e-003
tblVehicleEF	OBUS	5.1650e-003	0.02
tblVehicleEF	OBUS	8.3900e-004	2.1000e-004
tblVehicleEF	OBUS	2.2350e-003	2.8130e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.41	0.13
tblVehicleEF	OBUS	6.8200e-004	6.5300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	2.2000e-004
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tblVehicleEF	OBUS	0.05	0.07

tblVehicleEF	OBUS	9.4600e-004	1.1440e-003
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tblVehicleEF	OBUS	1.02	1.35
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tblVehicleEF	OBUS	9.1200e-004	2.2900e-004
tblVehicleEF	OBUS	9.1000e-005	1.2200e-003
tblVehicleEF	OBUS	5.1650e-003	0.02
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tblVehicleEF	OBUS	0.05	0.31

tblVehicleEF	OBUS	0.39	0.13
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tblVehicleEF	SBUS	0.03	0.03
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tblVehicleEF	SBUS	1.3130e-003	3.5100e-004
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tblVehicleEF	SBUS	0.28	0.02
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tblVehicleEF	SBUS	4.5600e-004	3.1000e-005
tblVehicleEF	SBUS	3.0740e-003	7.7800e-004
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tblVehicleEF	SBUS	5.0600e-004	3.0000e-005
tblVehicleEF	SBUS	0.01	3.6140e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
tblVehicleEF	SBUS	5.9210e-003	1.3950e-003
tblVehicleEF	SBUS	0.02	6.1530e-003
tblVehicleEF	SBUS	0.67	0.19
tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	9.6420e-003	0.04
tblVehicleEF	SBUS	0.23	0.02
tblVehicleEF	SBUS	0.01	3.2820e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	2.8000e-005
tblVehicleEF	SBUS	5.9210e-003	1.3950e-003
tblVehicleEF	SBUS	0.02	6.1530e-003
tblVehicleEF	SBUS	0.96	0.27
tblVehicleEF	SBUS	2.9370e-003	6.8100e-004
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	9.6420e-003	0.04
tblVehicleEF	SBUS	0.25	0.02
tblVehicleEF	SBUS	0.86	0.04
tblVehicleEF	SBUS	0.01	7.3930e-003
tblVehicleEF	SBUS	0.07	4.0100e-003
tblVehicleEF	SBUS	5.85	1.87
tblVehicleEF	SBUS	0.71	0.62
tblVehicleEF	SBUS	5.54	0.56
tblVehicleEF	SBUS	1,181.05	325.23
tblVehicleEF	SBUS	1,144.20	1,143.56
tblVehicleEF	SBUS	36.06	3.14
tblVehicleEF	SBUS	11.91	3.35
tblVehicleEF	SBUS	5.09	5.28
tblVehicleEF	SBUS	0.02	5.4310e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.0600e-004	3.0000e-005
tblVehicleEF	SBUS	0.02	5.1960e-003
tblVehicleEF	SBUS	2.7630e-003	2.7740e-003
tblVehicleEF	SBUS	0.03	0.03

tblVehicleEF	SBUS	4.6500e-004	2.7000e-005
tblVehicleEF	SBUS	3.2090e-003	7.9400e-004
tblVehicleEF	SBUS	0.02	6.3370e-003
tblVehicleEF	SBUS	0.68	0.19
tblVehicleEF	SBUS	1.2980e-003	3.6100e-004
tblVehicleEF	SBUS	0.12	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.29	0.02
tblVehicleEF	SBUS	0.01	3.0910e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	3.1000e-005
tblVehicleEF	SBUS	3.2090e-003	7.9400e-004
tblVehicleEF	SBUS	0.02	6.3370e-003
tblVehicleEF	SBUS	0.97	0.27
tblVehicleEF	SBUS	1.2980e-003	3.6100e-004
tblVehicleEF	SBUS	0.14	0.12
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.32	0.03
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	9.79	32.64
tblVehicleEF	UBUS	14.93	1.46
tblVehicleEF	UBUS	1,861.83	1,734.35
tblVehicleEF	UBUS	135.15	17.41
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03

tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	8.4220e-003	1.6730e-003
tblVehicleEF	UBUS	0.12	0.01
tblVehicleEF	UBUS	4.0730e-003	7.0000e-004
tblVehicleEF	UBUS	0.66	0.06
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.19	0.07
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.6230e-003	1.7200e-004
tblVehicleEF	UBUS	8.4220e-003	1.6730e-003
tblVehicleEF	UBUS	0.12	0.01
tblVehicleEF	UBUS	4.0730e-003	7.0000e-004
tblVehicleEF	UBUS	2.68	4.28
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.30	0.08
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	9.90	32.64
tblVehicleEF	UBUS	12.23	1.20
tblVehicleEF	UBUS	1,861.83	1,734.35
tblVehicleEF	UBUS	135.15	16.98
tblVehicleEF	UBUS	5.98	0.38

tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	0.02	3.2040e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	9.6640e-003	1.6440e-003
tblVehicleEF	UBUS	0.67	0.06
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.06
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.5760e-003	1.6800e-004
tblVehicleEF	UBUS	0.02	3.2040e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	9.6640e-003	1.6440e-003
tblVehicleEF	UBUS	2.69	4.28
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.16	0.07
tblVehicleEF	UBUS	1.95	4.19
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	9.80	32.64
tblVehicleEF	UBUS	14.43	1.42
tblVehicleEF	UBUS	1,861.83	1,734.35

tblVehicleEF	UBUS	135.15	17.36
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	0.52	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6450e-003
tblVehicleEF	UBUS	1.3790e-003	1.6700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.3130e-003
tblVehicleEF	UBUS	0.07	2.5170e-003
tblVehicleEF	UBUS	1.2680e-003	1.5300e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	0.66	0.06
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	0.01	3.9850e-003
tblVehicleEF	UBUS	1.6140e-003	1.7200e-004
tblVehicleEF	UBUS	9.6690e-003	1.7590e-003
tblVehicleEF	UBUS	0.15	0.01
tblVehicleEF	UBUS	4.2700e-003	6.8900e-004
tblVehicleEF	UBUS	2.68	4.28
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	1.28	0.08
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	79.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.49	0.33
tblVehicleTrips	ST_TR	1.68	0.38
tblVehicleTrips	SU_TR	0.73	0.16
tblVehicleTrips	SU_TR	1.68	0.38
tblVehicleTrips	WD_TR	6.83	0.47
tblVehicleTrips	WD_TR	1.68	0.38

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	295.3486	295.3486	0.0117	2.7500e-003	296.4606
Mobile	0.1654	5.7301	1.1902	0.0198	0.6496	0.0813	0.7309	0.1814	0.0778	0.2592	0.0000	1,936.8345	1,936.8345	0.0738	0.0000	1,938.6799
Offroad	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Waste						0.0000	0.0000		0.0000	0.0000	54.4767	0.0000	54.4767	3.2195	0.0000	134.9637
Water						0.0000	0.0000		0.0000	0.0000	19.6457	256.9089	276.5546	2.0284	0.0498	342.1167
Total	**1.3831**	**6.8803**	**1.7823**	**0.0222**	**0.6496**	**0.1211**	**0.7707**	**0.1814**	**0.1145**	**0.2959**	**74.1224**	**2,692.4717**	**2,766.5940**	**5.3992**	**0.0526**	**2,917.2460**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Energy	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	295.3486	295.3486	0.0117	2.7500e-003	296.4606
Mobile	0.1654	5.7301	1.1902	0.0198	0.6496	0.0813	0.7309	0.1814	0.0778	0.2592	0.0000	1,936.8345	1,936.8345	0.0738	0.0000	1,938.6799
Offroad	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Waste						0.0000	0.0000		0.0000	0.0000	54.4767	0.0000	54.4767	3.2195	0.0000	134.9637
Water						0.0000	0.0000		0.0000	0.0000	19.6457	256.9089	276.5546	2.0284	0.0498	342.1167
Total	**1.3831**	**6.8803**	**1.7823**	**0.0222**	**0.6496**	**0.1211**	**0.7707**	**0.1814**	**0.1145**	**0.2959**	**74.1224**	**2,692.4717**	**2,766.5940**	**5.3992**	**0.0526**	**2,917.2460**

	ROG	NOx	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	Demolition	Demolition	6/1/2020	6/1/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 6.71

Residential Indoor: 0; Residential Outdoor: 0; 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
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1654	5.7301	1.1902	0.0198	0.6496	0.0813	0.7309	0.1814	0.0778	0.2592	0.0000	1,936.8345	1,936.8345	0.0738	0.0000	1,938.6799
Unmitigated	0.1654	5.7301	1.1902	0.0198	0.6496	0.0813	0.7309	0.1814	0.0778	0.2592	0.0000	1,936.8345	1,936.8345	0.0738	0.0000	1,938.6799

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Industrial Park	26.00	18.33	8.95	327,161	327,161
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	80.00	80.00	80.00	1,164,762	1,164,762
Total	106.00	98.33	88.95	1,491,923	1,491,923

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
Industrial Park	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.000000	0.000000	0.000000	0.000000	0.153800	0.000000	0.230800	0.615400	0.000000	0.000000	0.000000	0.000000	0.000000
Other Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.106300	0.000000	0.106300	0.787400	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

East End and County Industrial (Operations - Trucks) - San Bernardino-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	271.9504	271.9504	0.0112	2.3200e-003	272.9233
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	271.9504	271.9504	0.0112	2.3200e-003	272.9233
NaturalGas Mitigated	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3982	23.3982	4.5000e-004	4.3000e-004	23.5373
NaturalGas Unmitigated	2.3600e-003	0.0215	0.0181	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003	0.0000	23.3982	23.3982	4.5000e-004	4.3000e-004	23.5373

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	134948	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2013	7.2013	1.4000e-004	1.3000e-004	7.2441
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	303519	1.6400e-003	0.0149	0.0125	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1969	16.1969	3.1000e-004	3.0000e-004	16.2932
Total		**2.3700e-003**	**0.0215**	**0.0181**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3983**	**23.3983**	**4.5000e-004**	**4.3000e-004**	**23.5373**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Industrial Park	134948	7.3000e-004	6.6200e-003	5.5600e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.2013	7.2013	1.4000e-004	1.3000e-004	7.2441
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	303519	1.6400e-003	0.0149	0.0125	9.0000e-005		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	16.1969	16.1969	3.1000e-004	3.0000e-004	16.2932
Total		**2.3700e-003**	**0.0215**	**0.0181**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**	**0.0000**	**23.3983**	**23.3983**	**4.5000e-004**	**4.3000e-004**	**23.5373**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	416505	132.7074	5.4800e-003	1.1300e-003	133.1822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Unrefrigerated Warehouse-No Rail	403277	128.4927	5.3000e-003	1.1000e-003	128.9524
Total		**271.9504**	**0.0112**	**2.3200e-003**	**272.9233**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	416505	132.7074	5.4800e-003	1.1300e-003	133.1822
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Unrefrigerated Warehouse-No Rail	403277	128.4927	5.3000e-003	1.1000e-003	128.9524
Total		**271.9504**	**0.0112**	**2.3200e-003**	**272.9233**

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	tons/yr										MT/yr					
Mitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Unmitigated	1.1156	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.4000e-004	8.0000e-005	9.0300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0175	0.0175	5.0000e-005	0.0000	0.0187
Total	**1.1156**	**8.0000e-005**	**9.0300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0175**	**0.0175**	**5.0000e-005**	**0.0000**	**0.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	276.5546	2.0284	0.0498	342.1167
Unmitigated	276.5546	2.0284	0.0498	342.1167

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	12.8413 / 0	57.3496	0.4206	0.0103	70.9453
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	49.0828 / 0	219.2050	1.6078	0.0395	271.1714
Total		**276.5546**	**2.0284**	**0.0498**	**342.1168**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	12.8413 / 0	57.3496	0.4206	0.0103	70.9453
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	49.0828 / 0	219.2050	1.6078	0.0395	271.1714
Total		**276.5546**	**2.0284**	**0.0498**	**342.1168**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	54.4767	3.2195	0.0000	134.9637
Unmitigated	54.4767	3.2195	0.0000	134.9637

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	68.86	13.9780	0.8261	0.0000	34.6298
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	199.51	40.4987	2.3934	0.0000	100.3339
Total		**54.4767**	**3.2195**	**0.0000**	**134.9637**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	68.86	13.9780	0.8261	0.0000	34.6298
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	199.51	40.4987	2.3934	0.0000	100.3339
Total		**54.4767**	**3.2195**	**0.0000**	**134.9637**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	4	4.00	365	200	0.37	CNG

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/Backhoes	0.0998	1.1286	0.5650	2.3200e-003		0.0381	0.0381		0.0351	0.0351	0.0000	203.3622	203.3622	0.0658	0.0000	205.0065
Total	**0.0998**	**1.1286**	**0.5650**	**2.3200e-003**		**0.0381**	**0.0381**		**0.0351**	**0.0351**	**0.0000**	**203.3622**	**203.3622**	**0.0658**	**0.0000**	**205.0065**

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 3.4:

EMFAC 2017 OUTPUTS

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EMFAC2017 Derived CalEEMod Annual Emission Rates: Year 2021[1,2]

Season	Pollutant	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH
Annual	CH4_IDLEX	0	0	0	0	0.0049837	0.003405504	0.003225462	0.032013899	0.0093651	0	0	0.0395862	0
Annual	CH4_RUNEX	0.0027952	0.0081894	0.0048265	0.0066047	0.0071408	0.004523783	0.006034474	0.062949643	0.0106635	4.1923509	0.33151	0.0073978	0.0038871
Annual	CH4_STREX	0.0556647	0.0929523	0.0797454	0.0984032	0.0168869	0.010143599	0.008831348	1.55061E-07	0.0261524	0.0181108	0.252842	0.0039123	0
Annual	CO_IDLEX	0	0	0	0	0.1743286	0.137936893	0.339764491	7.819516196	0.4885353	0	0	1.819668	0
Annual	CO_RUNEX	0.7038211	1.628327	1.0628754	1.3275246	0.9687591	0.610244648	0.552089299	0.510783247	1.1905632	32.642274	21.158349	0.6248863	0.3656562
Annual	CO_STREX	2.2231975	2.5369051	2.8883635	3.5313941	1.0717778	0.638021478	1.032396243	0.002442302	2.806513	1.4560005	8.7665344	0.5373075	0
Annual	CO2_NBIO_IDLEX	0	0	0	0	9.4064398	14.62605413	71.05575557	1459.929504	68.327944	0	0	336.96172	0
Annual	CO2_NBIO_RUNEX	269.32893	319.0925	344.02498	425.69675	656.93723	657.5141786	1029.533601	1411.06358	1507.2301	1734.352	211.16021	1143.5566	958.86184
Annual	CO2_NBIO_STREX	55.476182	67.439383	72.937686	90.074138	10.989389	7.956948578	8.42989049	0.02442091	22.189961	17.411206	61.868239	3.1117892	0
Annual	NOX_IDLEX	0	0	0	0	0.0810311	0.118130961	0.610019941	7.64727149	0.3865268	0	0	3.4492598	0
Annual	NOX_RUNEX	0.0442786	0.1494599	0.1039893	0.1388781	1.6883684	1.812640279	2.219884918	3.239238629	1.4684029	0.3844818	1.1699871	5.3628564	4.6980449
Annual	NOX_STREX[3]	0.1991511	0.3263968	0.3418118	0.4251585	0.3191767	0.206077185	1.213918848	1.921174137	0.5685805	0.1812658	0.2653944	0.8972878	0
Annual	PM10_IDLEX	0	0	0	0	0.0009425	0.00139109	0.00201948	0.011411486	0.0015088	0	0	0.004472	0
Annual	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.06117883	0.13034	0.0802389	0.01176	0.7448002	0.13034
Annual	PM10_PMTW	0.008	0.008	0.008	0.008	0.0099508	0.01075622	0.012000003	0.035669839	0.012	0.0252514	0.004	0.0110964	0.016
Annual	PM10_RUNEX	0.0015256	0.0024042	0.0015967	0.0017261	0.0118206	0.01464038	0.064755987	0.052360106	0.0257142	0.002645	0.0017889	0.0339824	0.1501643
Annual	PM10_STREX	0.0019475	0.0030866	0.0020413	0.0021813	0.0002758	0.000133275	0.000105593	7.70075E-07	0.0002288	0.0001665	0.003105	2.959E-05	0
Annual	PM25_IDLEX	0	0	0	0	0.0009018	0.001330912	0.001932118	0.01091783	0.0014435	0	0	0.0042785	0
Annual	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026219498	0.05586	0.0343881	0.00504	0.3192001	0.05586
Annual	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024877	0.002689055	0.003000001	0.00891746	0.003	0.0063128	0.001	0.0027741	0.004
Annual	PM25_RUNEX	0.0014053	0.0022126	0.0014694	0.0015932	0.0112838	0.013994591	0.061950345	0.050095016	0.0245821	0.0025167	0.0016762	0.0325024	0.1436682
Annual	PM25_STREX	0.0017907	0.0028383	0.0018771	0.0020076	0.0002536	0.000122542	9.70889E-05	7.08055E-07	0.0002103	0.0001531	0.0029295	2.72E-05	0
Annual	ROG_DIURN	0.0663382	0.2108263	0.1079579	0.1230749	0.0033357	0.001637551	0.000658096	4.06616E-06	0.0028126	0.0016732	1.4392661	0.0007785	0
Annual	ROG_HTSK	0.1101874	0.2874921	0.1575334	0.1798212	0.0917145	0.048256081	0.020661187	0.000125949	0.0265874	0.0100097	0.8391299	0.0057808	0
Annual	ROG_IDLEX	0	0	0	0	0.0212718	0.016817164	0.019608388	0.595927035	0.0537522	0	0	0.1911516	0
Annual	ROG_RESTL	0.0518091	0.1450136	0.0873404	0.1055262	0.0016026	0.00082606	0.000326379	2.31129E-06	0.0011443	0.0007005	0.7970435	0.0003506	0
Annual	ROG_RUNEX	0.0109357	0.0365991	0.0201809	0.0302903	0.0732937	0.067317206	0.102953629	0.085371532	0.0846054	0.0630288	2.2561178	0.103521	0.0836875
Annual	ROG_RUNLS	0.2233904	0.9541387	0.5033139	0.5331461	0.6235436	0.30825808	0.114872102	0.000636769	0.3103584	0.04956	2.0942458	0.0440672	0
Annual	ROG_STREX	0.2500506	0.4847802	0.3821023	0.4972444	0.0848196	0.050112994	0.046902675	8.04745E-07	0.1343682	0.0718094	1.9153196	0.0224585	0
Annual	SO2_IDLEX	0	0	0	0	9.1E-05	0.000139803	0.000673912	0.013656421	0.0006526	0	0	0.0032021	0
Annual	SO2_RUNEX	0.0026645	0.0031576	0.0034037	0.0042091	0.0063952	0.006344377	0.009809653	0.012952757	0.0147185	0.0039851	0.0020896	0.0108928	0.0090647
Annual	SO2_STREX	0.000549	0.0006674	0.0007218	0.0008914	0.0001087	7.87405E-05	8.34206E-05	2.41665E-07	0.0002196	0.0001723	0.0006122	3.079E-05	0
Annual	TOG_DIURN	0.0663382	0.2108263	0.1079579	0.1230749	0.0033357	0.001637551	0.000658096	4.06616E-06	0.0028126	0.0016732	1.4392661	0.0007785	0
Annual	TOG_HTSK	0.1101874	0.2874921	0.1575334	0.1798212	0.0917145	0.048256081	0.020661187	0.000125949	0.0265874	0.0100097	0.8391299	0.0057808	0
Annual	TOG_IDLEX	0	0	0	0	0.0298392	0.022762492	0.025720608	0.682783003	0.0710173	0	0	0.2713778	0
Annual	TOG_RESTL	0.0518091	0.1450136	0.0873404	0.1055262	0.0016026	0.00082606	0.000326379	2.31129E-06	0.0011443	0.0007005	0.7970435	0.0003506	0
Annual	TOG_RUNEX	0.0159058	0.0533445	0.0294007	0.0425849	0.0910684	0.079174945	0.119742284	0.156677972	0.1094732	4.282118	2.7574056	0.1231873	0.0952727
Annual	TOG_RUNLS	0.2233904	0.9541387	0.5033139	0.5331461	0.6235436	0.30825808	0.114872102	0.000636769	0.3103584	0.04956	2.0942458	0.0440672	0
Annual	TOG_STREX	0.2737721	0.5307695	0.4183521	0.544359	0.0928668	0.05486742	0.051352525	8.81095E-07	0.1471163	0.0786223	2.0836835	0.0245892	0
Summer	CH4_IDLEX	0	0	0	0	0.0049997	0.003415946	0.003061174	0.033341052	0.0093934	0	0	0.0396266	0
Summer	CH4_RUNEX	0.0032033	0.0092858	0.0055092	0.007478	0.0073182	0.00457514	0.006085656	0.062950823	0.0109229	4.1923834	0.3246099	0.0074896	0.0038871
Summer	CH4_STREX	0.0473499	0.0783953	0.0676323	0.0834455	0.0161054	0.009687044	0.008420186	1.46812E-07	0.0247228	0.0161606	0.2177893	0.0032451	0
Summer	CO_IDLEX	0	0	0	0	0.1743286	0.137936893	0.280619215	7.653520669	0.4698515	0	0	1.7801407	0
Summer	CO_RUNEX	0.8647398	1.9652517	1.2962839	1.5995122	0.9901365	0.615999951	0.558120856	0.511157211	1.2206945	32.643824	21.28632	0.6352326	0.3656562
Summer	CO_STREX	1.8462317	2.095357	2.3877082	2.9232651	1.0033939	0.599052067	0.964926873	0.002295356	2.5739208	1.1982261	7.9671155	0.3820993	0
Summer	CO2_NBIO_IDLEX	0	0	0	0	9.4064398	14.62605413	72.29283646	1453.321171	68.709055	0	0	345.45787	0
Summer	CO2_NBIO_RUNEX	294.16165	345.09102	369.57179	452.84447	656.97531	657.5243072	1029.544275	1411.064209	1507.2834	1734.3548	211.14408	1143.575	958.86184
Summer	CO2_NBIO_STREX	54.74545	66.473213	71.937359	88.842382	10.866786	7.887009837	8.315129091	0.024187855	21.795602	16.975738	59.679044	2.852902	0
Summer	NOX_IDLEX	0	0	0	0	0.0810311	0.118130961	0.616306718	7.401936537	0.3858682	0	0	3.5241089	0
Summer	NOX_RUNEX	0.0401498	0.1340085	0.0937779	0.1249907	1.5801341	1.703556562	2.085951018	3.050717065	1.3540209	0.3792127	0.9917397	5.0269753	4.4152724
Summer	NOX_STREX[3]	0.1854672	0.3037083	0.3182019	0.3957453	0.3036583	0.19634194	1.209951176	1.921152468	0.5551696	0.1710056	0.2471691	0.8949394	0
Summer	PM10_IDLEX	0	0	0	0	0.0009425	0.00139109	0.001705021	0.010845613	0.0012751	0	0	0.0037777	0
Summer	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.06117883	0.13034	0.0802389	0.01176	0.7448002	0.13034
Summer	PM10_PMTW	0.008	0.008	0.008	0.008	0.0099508	0.01075622	0.012000003	0.035669839	0.012	0.0252514	0.004	0.0110964	0.016
Summer	PM10_RUNEX	0.0015256	0.0024042	0.0015967	0.0017261	0.0118206	0.01464038	0.064755987	0.052360106	0.0257142	0.002645	0.0017889	0.0339824	0.1501643
Summer	PM10_STREX	0.0019475	0.0030866	0.0020413	0.0021813	0.0002758	0.000133275	0.000105593	7.70075E-07	0.0002288	0.0001665	0.003105	2.959E-05	0
Summer	PM25_IDLEX	0	0	0	0	0.0009018	0.001330912	0.001631263	0.010376437	0.0012199	0	0	0.0036143	0
Summer	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026219498	0.05586	0.0343881	0.00504	0.3192001	0.05586
Summer	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024877	0.002689055	0.003000001	0.00891746	0.003	0.0063128	0.001	0.0027741	0.004
Summer	PM25_RUNEX	0.0014053	0.0022126	0.0014694	0.0015932	0.0112838	0.013994591	0.061950345	0.050095016	0.0245821	0.0025167	0.0016762	0.0325024	0.1436682
Summer	PM25_STREX	0.0017907	0.0028383	0.0018771	0.0020076	0.0002536	0.000122542	9.70889E-05	7.08055E-07	0.0002103	0.0001531	0.0029295	2.72E-05	0
Summer	ROG_DIURN	0.1353972	0.4352889	0.2212134	0.250538	0.0066401	0.003190036	0.001309997	8.54948E-06	0.0054908	0.0032038	3.1287312	0.0013949	0
Summer	ROG_HTSK	0.1298485	0.3595682	0.1878744	0.2084537	0.1114657	0.057979904	0.024904285	0.000148187	0.0302377	0.0126241	1.2766119	0.006153	0
Summer	ROG_IDLEX	0	0	0	0	0.0212718	0.016817164	0.018809933	0.622643726	0.0537962	0	0	0.1909036	0
Summer	ROG_RESTL	0.1103395	0.3164602	0.1855014	0.2206853	0.0037106	0.001837713	0.000766105	5.84817E-06	0.0026556	0.0016441	2.1233708	0.0006805	0
Summer	ROG_RUNEX	0.012416	0.0412901	0.0228531	0.0337046	0.0742652	0.067550498	0.103211681	0.08537996	0.0858782	0.0631191	2.193519	0.1039846	0.0836875
Summer	ROG_RUNLS	0.2221277	0.9519552	0.5016021	0.5316215	0.6302111	0.311298516	0.116655297	0.000657458	0.3126902	0.0486713	2.085293	0.0405579	0
Summer	ROG_STREX	0.2103627	0.4054465	0.3205056	0.4174386	0.0805865	0.047679171	0.044573718	7.64627E-07	0.1267168	0.0638026	1.6377419	0.0186241	0
Summer	SO2_IDLEX	0	0	0	0	9.1E-05	0.000139803	0.000685711	0.013592903	0.0006562	0	0	0.0032824	0
Summer	SO2_RUNEX	0.0029102	0.0034149	0.0036565	0.0044778	0.0063956	0.006344477	0.009809759	0.012952764	0.0147191	0.0039852	0.0020894	0.010893	0.0090647
Summer	SO2_STREX	0.0005418	0.0006578	0.0007119	0.0008792	0.0001075	7.80484E-05	8.22849E-05	2.39358E-07	0.0002157	0.000168	0.0005906	2.823E-05	0
Summer	TOG_DIURN	0.1353972	0.4352889	0.2212134	0.250538	0.0066401	0.003190036	0.001309997	8.54948E-06	0.0054908	0.0032038	3.1287312	0.0013949	0
Summer	TOG_HTSK	0.1298485	0.3595682	0.1878744	0.2084537	0.1114657	0.057979904	0.024904285	0.000148187	0.0302377	0.0126241	1.2766119	0.006153	0
Summer	TOG_IDLEX	0	0	0	0	0.0298392	0.022762492	0.024607764	0.713284024	0.0710675	0	0	0.2710954	0
Summer	TOG_RESTL	0.1103395	0.3164602	0.1855014	0.2206853	0.0037106	0.001837713	0.000766105	5.84817E-06	0.0026556	0.0016441	2.1233708	0.0006805	0
Summer	TOG_RUNEX	0.018064	0.0601829	0.0332969	0.047611	0.092486	0.079515365	0.120118832	0.156690271	0.1113304	4.2822498	2.6838314	0.1238638	0.0952727
Summer	TOG_RUNLS	0.2221277	0.9519552	0.5016021	0.5316215	0.6302111	0.311298516	0.116655297	0.000657458	0.3126902	0.0486713	2.085293	0.0405579	0
Summer	TOG_STREX	0.2303191	0.4439099	0.3509118	0.4569913	0.0882321	0.052202691	0.04880261	8.37171E-07	0.1387389	0.0698558	1.7817819	0.0203911	0

Winter	CH4_IDLEX	0	0	0	0	0.004987	0.003407483	0.003466054	0.025953045	0.0093641	0	0	0.0395933	0
Winter	CH4_RUNEX	0.0027263	0.0079977	0.0047104	0.006431	0.007159	0.004529879	0.006038362	0.003774371	0.0106922	4.1923543	0.3268346	0.0073932	0.0038871
Winter	CH4_STREX	0.0553808	0.0923755	0.0792743	0.0978211	0.0167281	0.010056423	0.008731617	1.53456E-07	0.0260286	0.0179114	0.2437691	0.0040097	0
Winter	CO_IDLEX	0	0	0	0	0.1743286	0.137936893	0.422230434	7.979449175	0.5143368	0	0	1.8742532	0
Winter	CO_RUNEX	0.6663378	1.5476718	1.0074668	1.254853	0.9709441	0.61085072	0.552665715	0.364152123	1.193777	32.642422	20.180738	0.6242608	0.3656562
Winter	CO_STREX	2.1873081	2.4932064	2.8419928	3.4729901	1.0549786	0.629366089	1.015703296	0.00241406	2.7857808	1.4234835	8.4097144	0.5550862	0
Winter	CO2_NBIO_IDLEX	0	0	0	0	9.4064398	14.62605413	69.34269345	1454.790207	67.801647	0	0	325.22895	0
Winter	CO2_NBIO_RUNEX	263.51294	312.92864	337.9663	419.24769	656.94109	657.5152494	1029.53462	1371.006244	1507.2358	1734.3522	209.47268	1143.5555	958.86184
Winter	CO2_NBIO_STREX	55.413324	67.356191	72.853805	89.967819	10.959815	7.941637101	8.40188217	0.024376117	22.154905	17.356544	61.057008	3.1418984	0
Winter	NOX_IDLEX	0	0	0	0	0.0810311	0.118130961	0.601337566	7.900527646	0.3874363	0	0	3.3458967	0
Winter	NOX_RUNEX	0.0418713	0.1415969	0.0983148	0.1313631	1.6598162	1.783704707	2.182531388	3.150011725	1.4385082	0.3831829	1.1277899	5.2816324	4.6212937
Winter	NOX_STREX[3]	0.1964097	0.3220239	0.3370287	0.4193227	0.3138922	0.202766186	1.212771687	1.921168183	0.5646423	0.179325	0.2618769	0.8974612	0
Winter	PM10_IDLEX	0	0	0	0	0.0009425	0.00139109	0.002453734	0.011998159	0.0018316	0	0	0.0054308	0
Winter	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060485435	0.13034	0.0802389	0.01176	0.7448002	0.13034
Winter	PM10_PMTW	0.008	0.008	0.008	0.008	0.0099508	0.01075622	0.012000003	0.035265527	0.012	0.0252514	0.004	0.0110964	0.016
Winter	PM10_RUNEX	0.0015256	0.0024042	0.0015967	0.0017261	0.0118206	0.01464038	0.064755987	0.052288082	0.0257142	0.002645	0.0017889	0.0339824	0.1501643
Winter	PM10_STREX	0.0019475	0.0030866	0.0020413	0.0021813	0.0002758	0.000133275	0.000105593	7.70075E-07	0.0002288	0.0001665	0.003105	2.959E-05	0
Winter	PM25_IDLEX	0	0	0	0	0.0009018	0.001330912	0.002347586	0.011479124	0.0017524	0	0	0.0051958	0
Winter	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.025922329	0.05586	0.0343881	0.00504	0.3192001	0.05586
Winter	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024877	0.002689055	0.003000001	0.008816382	0.003	0.0063128	0.001	0.0027741	0.004
Winter	PM25_RUNEX	0.0014053	0.0022126	0.0014694	0.0015932	0.0112838	0.013994591	0.061950345	0.050026107	0.0245821	0.0025167	0.0016762	0.0325024	0.1436682
Winter	PM25_STREX	0.0017907	0.0028383	0.0018771	0.0020076	0.0002536	0.000122542	9.70889E-05	7.08055E-07	0.0002103	0.0001531	0.0029295	2.72E-05	0
Winter	ROG_DIURN	0.0668146	0.2210982	0.1076346	0.120047	0.0037146	0.001745592	0.000727715	4.44654E-06	0.0030603	0.0017587	1.6982209	0.0007935	0
Winter	ROG_HTSK	0.1213994	0.3329009	0.1749739	0.1959275	0.1094405	0.056332092	0.023291743	0.000149012	0.0289273	0.0113667	1.1217415	0.0063372	0
Winter	ROG_IDLEX	0	0	0	0	0.0212718	0.016817164	0.020723121	0.558761938	0.0536914	0	0	0.1914941	0
Winter	ROG_RESTL	0.0484278	0.1347236	0.0817095	0.0992053	0.0015809	0.000807476	0.000322058	2.35356E-06	0.0011589	0.0006888	0.7110844	0.0003605	0
Winter	ROG_RUNEX	0.0106467	0.0356582	0.0196542	0.029388	0.073384	0.067342742	0.102978089	0.08078862	0.0847451	0.0630387	2.2172837	0.1034998	0.0836875
Winter	ROG_RUNLS	0.2518981	1.1172226	0.5838645	0.6135981	0.6715942	0.333044484	0.125143621	0.000665898	0.3308792	0.0587555	2.3823221	0.0528047	0
Winter	ROG_STREX	0.2482716	0.4806309	0.3790098	0.4931451	0.0839421	0.04963869	0.046441274	7.96725E-07	0.1337145	0.07088	1.841327	0.0230331	0
Winter	SO2_IDLEX	0	0	0	0	9.1E-05	0.000139803	0.000657573	0.013744137	0.0006476	0	0	0.0030912	0
Winter	SO2_RUNEX	0.0026069	0.0030966	0.0033437	0.0041453	0.0063952	0.006344388	0.009809663	0.012952758	0.0147186	0.0039851	0.0020729	0.0108928	0.0090647
Winter	SO2_STREX	0.0005484	0.0006665	0.0007209	0.0008903	0.0001085	7.85889E-05	8.31434E-05	2.41221E-07	0.0002192	0.0001718	0.0006042	3.109E-05	0
Winter	TOG_DIURN	0.0668146	0.2210982	0.1076346	0.120047	0.0037146	0.001745592	0.000727715	4.44654E-06	0.0030603	0.0017587	1.6982209	0.0007935	0
Winter	TOG_HTSK	0.1213994	0.3329009	0.1749739	0.1959275	0.1094405	0.056332092	0.023291743	0.000149012	0.0289273	0.0113667	1.1217415	0.0063372	0
Winter	TOG_IDLEX	0	0	0	0	0.0298392	0.022762492	0.027275057	0.636107932	0.0709481	0	0	0.2717678	0
Winter	TOG_RESTL	0.0484278	0.1347236	0.0817095	0.0992053	0.0015809	0.000807476	0.000322058	2.35356E-06	0.0011589	0.0006888	0.7110844	0.0003605	0
Winter	TOG_RUNEX	0.015485	0.0519746	0.0286336	0.0413258	0.0912001	0.079212207	0.119777974	0.092027034	0.1096769	4.2821325	2.7110317	0.1231564	0.0952727
Winter	TOG_RUNLS	0.2518981	1.1172226	0.5838645	0.6135981	0.6715942	0.333044484	0.125143621	0.000665898	0.3308792	0.0587555	2.3823221	0.0528047	0
Winter	TOG_STREX	0.2718243	0.5262267	0.4149663	0.5398739	0.0919061	0.054348118	0.05084735	8.72313E-07	0.1464006	0.0776047	2.0032369	0.0252183	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 San Bernardino County 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.