Appendix 7
Greenhouse Gas Analysis

SOUTH MILLIKEN DISTRIBUTION CENTER

Project No. PLN17-20013

INITIAL STUDY

S. Milliken Distribution Center

GREENHOUSE GAS ANALYSIS

CITY OF EASTVALE

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OCTOBER 17, 2017

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LIST OF ABBREVIATED TERMS

(1)	Reference
ARB	California Air Resources Board
AQIA	Air Quality Impact Analysis
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CAT	Climate Action Team
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CH4	Methane
CO	Carbon Monoxide
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
CPUC	California Public Utilities Commission
EPA	Environmental Protection Agency
EPS	Emission Performance Standard
GCC	Global Climate Change
GHGA	Greenhouse Gas Analysis
GWP	Global Warming Potential
HFC	Hydrofluorocarbons
LCA	Life-Cycle Analysis
MMs	Mitigation Measures
MMTCO2e	Million Metric Ton of Carbon Dioxide Equivalent
MTCO2e	Metric Ton of Carbon Dioxide Equivalent
N20	Nitrogen Dioxide
NIOSH	National Institute for Occupational Safety and Health
NOx	Oxides of Nitrogen
PFC	Perfluorocarbons
PM10	Particulate Matter 10 microns in diameter or less
PM2.5	Particulate Matter 2.5 microns in diameter or less

PPM	Parts Per Million
Project	S. Milliken Distribution Center
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
UNFCCC	United Nations' Framework Convention on Climate Change
VOC	Volatile Organic Compounds

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EXECUTIVE SUMMARY

The City of Eastvale does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. The Air Quality Management District's (AQMD)'s adopted numerical threshold of 10,000 metric tons carbon dioxide equivalent (MTCO2e) per year for industrial stationary source emissions is selected as the significance criterion. The AQMD-adopted industrial threshold was selected by the City because the proposed Project is analogous to an industrial use much more closely than any other land use such as commercial or residential in terms of its expected operating characteristics. The Project proposes large buildings with loading bays and fenced truck courts that are expected to house businesses that serve mid- stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, analysis of the Project's traffic generation in this report is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, 2012 for industrial and warehouse uses. Also, 10,000 MTCO2e has been used as the significance threshold by many local government lead agencies for logistics projects throughout the SCAG region since the AQMD adopted this threshold for its own use. Further, to ensure that the threshold is conservative in its application, although the AQMD uses their adopted 10,000 MTCO2e threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 MTCO2e threshold used in this report is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

Use of this threshold is also consistent with guidance provided in the CAPCOA *CEQA and Climate Change* handbook, as such the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 MTCO2e based on the review of 711 CEQA projects.

The Project will result in approximately 806.61 MTCO2e per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 4,771.03 MTCO2e 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 shown on Table ES-1, the Project has the potential to generate a total of approximately 5,577.64 MTCO2e per year. As such, the Project would not exceed the SCAQMD's numeric threshold of 10,000 MTCO2e. Thus, the Project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions.

TABLE ES-1: PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	23.68	0.00165	0.00	23.76
Area	0.0171	5.00E-05	0.00	0.0183
Energy	291.62	0.0114	2.79E-03	292.74
Mobile Sources (Trucks)	3,541.32	0.1787	0.00	3,545.79
Mobile Sources (Passenger Cars)	1,224.49	0.0298	0.00	1,225.24
Waste	53.43	3.16	0.00	132.36
Water Usage	289.18	2.12	0.0521	357.73
Total CO_2E (All Sources)	**5,577.64**			

1 INTRODUCTION

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

1.1 SITE LOCATION

The proposed S. Milliken Distribution Center site is located north of SR-60 Freeway and east of Milliken Avenue in the City of Eastvale, as shown on Exhibit 1-A. State Route 60 (SR-60) Freeway is located approximately 300 feet south of the Project site and Interstate 15 (I-15) Freeway is located 0.25 miles east of the Project site.

1.2 STUDY AREA

The Project site is currently vacant and is designated by the City of Eastvale General Plan Land Use Map as Commercial Retail land use. (1) The properties adjacent to the Project site on the north side are designated as Light Industrial land use, the properties adjacent to the Project site on the south side are designated State Route 60 (SR 60) and Business Park land use, and properties adjacent to the Project site on the east side are designated as Commercial Retail land use.

1.3 PROJECT DESCRIPTION

The Project is proposed to consist of a total of 280,000 square feet of High-Cube Warehouse / Distribution Center use within a single building. The Project's site plan is illustrated on Exhibit 1-B. The Project is anticipated to have an Opening Year of 2018.

As part of the Project's design, all on-site indoor and outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) will be powered by non-combustion engines (e.g. electric). Since there are no exhaust emissions associated with the equipment, for purposes of the Project, emissions associated with yard trucks and forklifts are not included in the emissions totals.

Per the *S. Milliken Distribution Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc. the Project is expected to generate a net total of approximately 470 trip-ends per day (actual vehicles) (2). The net Project trip generation includes 178 truck trip-ends per day. This greenhouse gas study relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck emissions associated with the Project.

1.4 REGULATORY REQUIREMENTS

The Project would be required to comply with all mandates imposed by the State of California and the South Coast Air Quality Management District aimed at the reduction of air quality emissions. Those that are applicable to the Project and that would assist in the reduction of greenhouse gas emissions are:

- Global Warming Solutions Act of 2006 (AB32) (3)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375) (4)
- Pavely Fuel Efficiency Standards (AB1493). Establishes fuel efficiency ratings for new vehicles (5).
- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction (6).
- Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances (7).
- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020 (8).
- California Water Conservation in Landscaping Act of 2006 (AB1881). 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 (9).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (10).
- Renewable Portfolio Standards (SB 1078). 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 (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, the Pavley Standards, Low Carbon Fuel Standards, and Renewable Portfolio Standards (RPS) will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations.

1.5 CONSTRUCTION-SOURCE AIR POLLUTANT EMISSIONS MITIGATION MEASURES

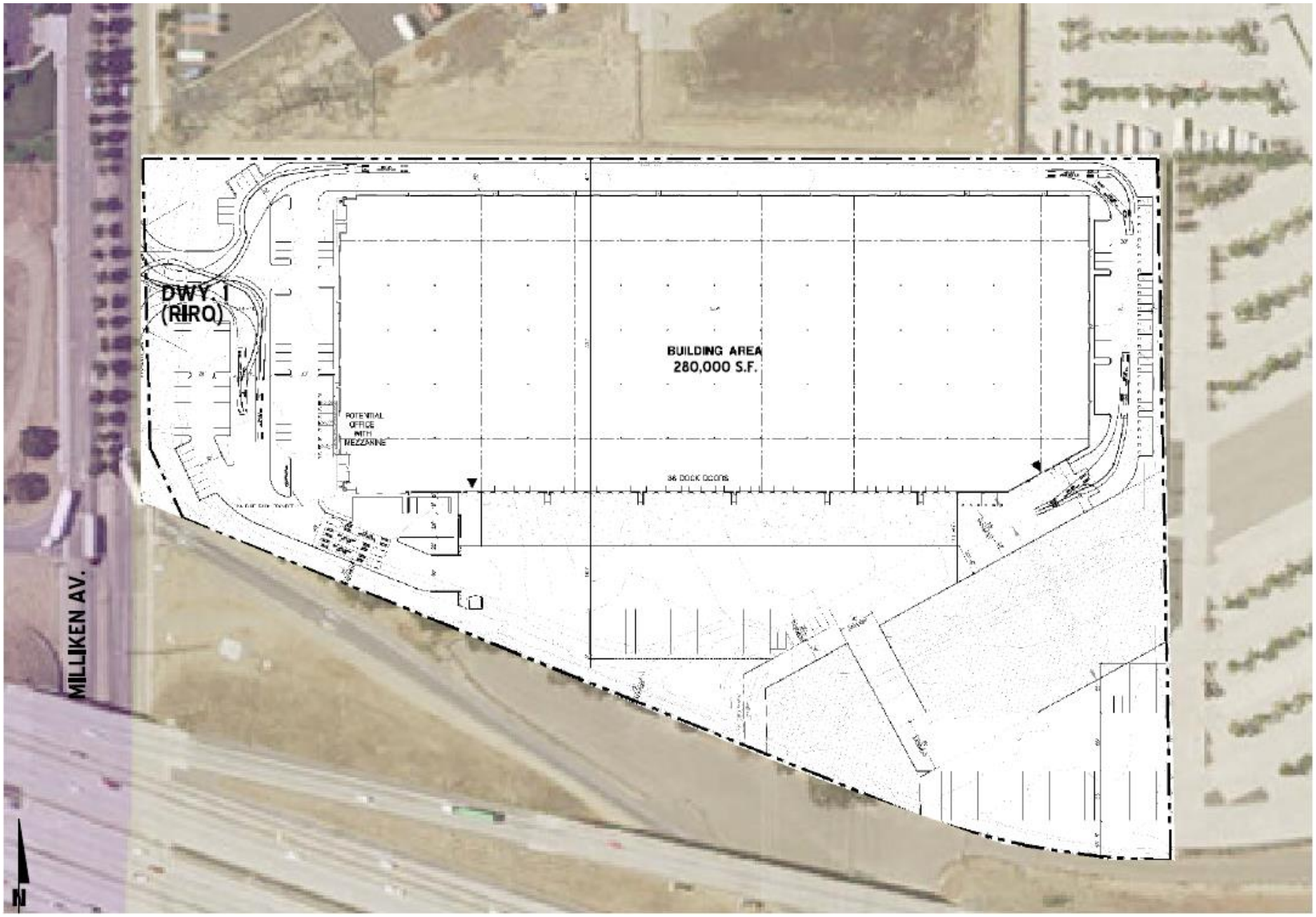
The Project Air Quality Impact Analysis (AQIA) establishes construction activity mitigation measures that would globally reduce air pollutant emissions generated by subsequent development proposals within the Project site. Although these measures could act to reduce GHG emissions, there is insufficient data to support any reductions associated with the construction activity mitigation measures identified in the AQIA. Thus, as a conservative measure no reduction in GHG emissions are taken for construction activity mitigation measures identified in the AQIA.

1.6 OPERATIONAL-SOURCE MITIGATION MEASURES

The Project would not result in a significant impact with respect to greenhouse gas emissions. Therefore, no mitigation measures are proposed.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN



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. GCC is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to the Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases 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 greenhouse gas 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 greenhouse gasses combined with the cumulative increase of all other sources of greenhouse gases, 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 GREENHOUSE GAS EMISSIONS INVENTORIES

Global

Worldwide anthropogenic (human) GHG emissions are tracked by the Intergovernmental Panel on Climate Change 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 2015. For the Year 2015, the sum of these emissions totaled approximately 28,872,564 Gg CO2e[1] (12) (13). The GHG emissions in more recent years may differ from the inventories presented in Table 2-1; however, the data is representative of currently available inventory data.

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 2005 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,"

United States

As noted in Table 2-1, the United States, as a single country, was the number one producer of GHG emissions in 2015. The primary greenhouse gas emitted by human activities in the United States was CO2, representing approximately 83 percent of total greenhouse gas emissions (14). Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 78 percent of the GHG emissions.

TABLE 2-1: TOP GHG PRODUCER COUNTRIES AND THE EUROPEAN UNION[2]

Emitting Countries	GHG Emissions (Gg CO2e)
China	11,895,765
United States	6,586,655
European Union (27 member countries)	4,315,773
Russian Federation	2,650,954
India	2,100,849
Japan	1,322,568
Total	**28,872,564**

State of California

CARB compiles GHG inventories for the State of California. Based upon the 2017 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2015 greenhouse gas emissions inventory, California emitted 440.4 MMTCO2e including emissions resulting from imported electrical power in 2015 (15). Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 MMTCO2e excluding emissions related to imported power (16).

2.3 GLOBAL CLIMATE CHANGE DEFINED

Global Climate Change (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, CO2 (Carbon Dioxide), N2O (Nitrous Oxide), CH4 (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. 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. According to the California Air Resources Board (CARB), the

2 Used http://di.unfccc.int/ghg_profile_annex1 data for Annex I countries and http://di.unfccc.int/ghg_profile_non_annex1 for Non-Annex I counties.

climate change since the industrial revolution differs from previous climate changes in both rate and magnitude (17).

Gases that trap heat in the atmosphere are often referred to as greenhouse gases. Greenhouse gases are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural greenhouse gas effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than today's current condition. 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.

Although California's rate of growth of greenhouse gas emissions is slowing, the state is still a substantial contributor to the U.S. emissions inventory total. In 2004, California is estimated to have produced 492 million gross metric tons of carbon dioxide equivalent (CO2e) greenhouse gas emissions. Despite a population increase of 16 percent between 1990 and 2004, California has significantly slowed the rate of growth of greenhouse gas emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls (18).

2.4 GREENHOUSE GASES

For the purposes of this analysis, emissions of carbon dioxide, methane, and nitrous oxide were evaluated (see Table 3-4 later in this report) because these gasses are the primary contributors to GCC from development projects. Although other substances such as fluorinated gases also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate these gases.

Greenhouse gases have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. Carbon dioxide is utilized as the reference gas for GWP, and thus has a GWP of 1.

The atmospheric lifetime and GWP of selected greenhouse gases are summarized at Table 2-2. As shown in the table below, GWP for the SAR range from 1 for carbon dioxide to 23,900 for sulfur hexafluoride and GWP for the AR4 range from 1 for carbon dioxide to 22,800 for sulfur hexafluoride.

TABLE 2-2: GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)	
		Second Assessment Report (SAR)	4th Assessment Report (AR4)
Carbon Dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous Oxide	120	310	298
HFC-23	264	11,700	14,800
HFC-134a	14.6	1,300	1,430
HFC-152a	1.5	140	124
Sulfur Hexafluoride (SF6)	3,200	23,900	22,800

Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

Water Vapor: Water vapor (H20) is the most abundant, important, and variable greenhouse gas 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 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 also 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).

There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. 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.

Carbon Dioxide: Carbon dioxide (CO2) is an odorless and colorless GHG. Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Carbon dioxide 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. Carbon dioxide is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (19).

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, CO2 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 carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (20).

Methane: Methane (CH4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.

Methane 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 methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide: Nitrous oxide (N2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide 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) (21).

Concentrations of nitrous oxide also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide 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 used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. Nitrous oxide can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction

Chlorofluorocarbons: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C2H6) 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 are no longer being used; therefore, it is not likely that health

effects would be experienced. Nonetheless, 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.

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.

Hydrofluorocarbons: Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF3), HFC-134a (CF3CH2F), and HFC-152a (CH3CHF2). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. EPA estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt (22). No health effects are known to result from exposure to HFCs, which are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons: Perfluorocarbons (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 (CF4) and hexafluoroethane (C2F6). The U.S. EPA estimates that concentrations of CF4 in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride: Sulfur hexafluoride (SF6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (22,800). The U.S. EPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Sulfur hexafluoride 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.

2.5 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 (3-5.5°F) to 75 to 85 percent under the medium warming range (5.5-8°F). 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 (8-10.5°F), there could be up to 100 more days per year with temperatures above 90oF in Los Angeles and 95oF in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures 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 they need. Although higher CO2 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 O3 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 global climate change 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 global climate change could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global climate change 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 global climate change 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 global climate change.

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 salt water, 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.

2.6 HUMAN HEALTH EFFECTS

The potential health effects related directly to the emissions of carbon dioxide, methane, and nitrous oxide as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to global climate change 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.

Specific health effects associated with directly emitted GHG emissions are as follows:

Water Vapor: 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.

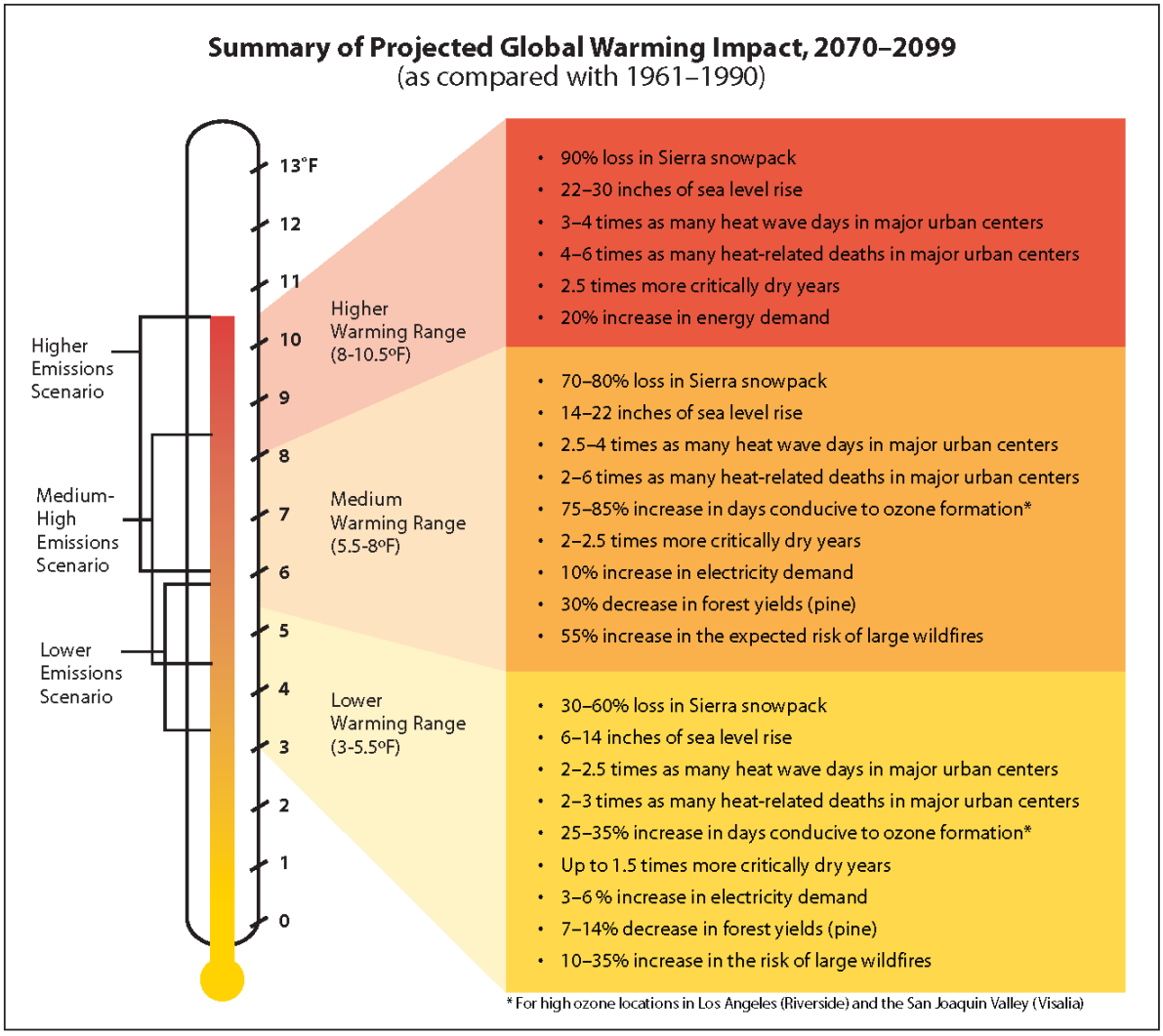
Carbon Dioxide: According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of carbon dioxide can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of carbon dioxide in the earth's atmosphere are estimated to be approximately 370 parts per million (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 (24).

Methane: Methane is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space (25).

Nitrous Oxide: Nitrous Oxide is often referred to as laughing gas; it is a colorless greenhouse gas. The health effects associated with exposure to elevated concentrations of nitrous oxide include dizziness, euphoria, slight hallucinations, and in extreme cases of elevated concentrations nitrous oxide can also cause brain damage (25).

Fluorinated Gases: High concentrations of fluorinated gases can also result in adverse health effects such as asphyxiation, dizziness, headache, cardiovascular disease, cardiac disorders, and in extreme cases, increased mortality (24).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT



Aerosols: The health effects of aerosols are similar to that of other fine particulate matter. Thus aerosols can cause elevated respiratory and cardiovascular diseases as well as increased mortality (26).

2.7 REGULATORY SETTING

International Regulation and the Kyoto Protocol:

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs for member nations to adopt.

The Kyoto protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto protocol are met, global GHG emissions could be reduced an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

2015 United Nations Paris Climate Change Conference

On December 12, 2015, which marks the 11th meeting of the Parties to the Kyoto Protocol, 195 nations, including the United States and China, agreed upon a strategy for combatting global climate change to be in effect in 2020. This historic meeting, known as the 21st annual Conference of the Parties (COP21), focused on five key elements: mitigation, a transparency system and global stock-take, adaptation, loss and damage, and support.

In mitigating global climate change, COP 21 participating nations agreed upon a universal long-term goal of keeping the global temperature to well below 2°C or 3.6°F well above pre-industrial levels. The agreement also encouraged participating nations to limit temperature increases even further to 1.5°C or 2.7°F above pre-industrial levels. In addition to that, nations agreed to peak their GHG emissions as soon as possible, with the recognition that developing countries may take longer than developed countries. Thereafter, nations are to undergo rapid reductions in accordance to best available technological advances. The nations are to submit national climate action plans that detail future objectives to address climate change.

In supporting a transparency system and global stock-take, the participating nations agreed to meet every 5 years to set more ambitious targets on global climate change as technologically feasible. The nations are to report to each other and to the public on their progress towards implementing targets and goals through a transparency and accountability system.

In adaptation, participating nations are to strengthen the ability of nations to deal with climate impacts and provide continued international support for adaptation to developing countries.

In supporting loss and damage, participating nations understand the importance of minimizing and addressing the loss and damage associated with adverse effects of global climate change. These nations acknowledge the need to cooperate with each other and support each other through safeguards, such as early warning systems, emergency preparedness, and risk insurance.

Participating nations are to support each other in their efforts to fight against global climate change. Developed countries within the COP21 are to continue their existing collective goal of utilizing 100 billion per year in support of the poorest and most vulnerable participating nations, known as climate finance, until 2025, when a new collective goal will be set (27) (28).

In accordance with Article 21, paragraph 1, of the Paris Agreement, the Agreement shall enter into force on the thirtieth day after the date on which at least 55 Parties to the COP21

accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary.

On October 5, 2016, the threshold for entry into force of the Paris Agreement was achieved. The Paris Agreement will enter into force on November 4, 2016 (29).

Federal Regulation and the Clean Air Act:

Coinciding 2009 meeting in Copenhagen, on December 7, 2009, the U.S. Environmental Protection Agency (EPA) issued an Endangerment Finding under Section 202(a) of the Clean Air Act, opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the Clean Air Act. To date, the EPA has not promulgated regulations on GHG emissions, but it has already begun to develop them.

Previously the EPA had not regulated GHGs under the Clean Air Act (30) because it asserted that the Act did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In Massachusetts v. Environmental Protection Agency et al. (127 S. Ct. 1438 (2007), however, the U.S. Supreme Court held that GHGs are pollutants under the Clean Air Act and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the unintended reduction of greenhouse gas emissions. In order to manage the state's energy needs and promote energy efficiency, AB 1575 created the California Energy Commission (CEC) in 1975.

Title 24 Energy Standards:

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (31) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. With the adoption of the Energy Commission's most recent standard, 2016 Building Energy Efficiency Standard, California is one step closer to the state's 2020 zero net energy goal, in which buildings produce as much energy as it consumes. The 2016 Standard is 28 percent more efficient for residential

construction and 5 percent more efficient for nonresidential construction than previous standards. The Standards, which took effect on January 1, 2017, focus on three key areas: updating residential requirements to move closer to California's zero net energy goals, updating nonresidential and high-rise residential requirements, and improving the clarity and consistency of existing regulations. Some improved measures in the Standards include (32):

Residential:

- High performance attics: extra insulation at the roof deck ceiling insulation to reduce attic temperature during hot summer days.
- High performance walls to reduce heating and cooling needs year-round.
- Lighting: Installation of high quality lighting that will require half the energy needs.
- Water Heating: Installation of tankless water heaters that reduce use by about 35 percent.

Nonresidential:

- Envelope: Revision of outer building (building envelope) requirements for all nonresidential and high-rise residential buildings.
- Lighting: Update power for lights to align with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards.
- Elevators: Require lights and fans to shut off when elevator is empty.
- Escalators and moving walkways in transit areas to be run at a lower, less energy-consuming speed when not in use.
- Windows and doors: Require lockout sensors that turn off cooling and heating systems if a door or window if left open for more than five minutes.

CALGreen:

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code) (33). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released the 2010 California Green Building Standards Code on its Web site. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

CALGreen contains both mandatory and voluntary measures, for Non-Residential land uses there are 39 mandatory measures including, but not limited to: exterior light pollution reduction, wastewater reduction by 20%, and commissioning of projects over 10,000 sf. There are two tiers of voluntary measures for Non-Residential land uses for a total of 36 additional elective measures.

The 2016 CALGreen includes additions and amendments to the construction waste reduction, disposal and recycling, and new requirements for photovoltaic systems and electric vehicle chargers (34). The 2016 CALGreen has also been rewritten to clarify and definitively identify the requirements and applicability for residential and nonresidential buildings.

California Assembly Bill No. 1493 (AB 1493):

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California (5). Further, the legislature stated that technological solutions to reduce greenhouse gas emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, ARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961) and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016.

In December 2004 a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of CCR 13 1900 and CCR 13 1961 as amended by AB 1493 and CCR 13 1961.1 (Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board, et al.). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court Case, Massachusetts vs. EPA, the primary issue in question is whether the federal CAA provides authority for USEPA to regulate CO2 emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA. On December 11, 2007, the judge in the Central Valley Chrysler-Jeep case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the USEPA denied California's waiver request. California filed a petition with the Ninth Circuit Court of Appeals challenging USEPA's denial on January 2, 2008.

The Obama administration subsequently directed the USEPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. In summary, the USEPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater greenhouse gas benefits as the AB 1493 regulations for the 2012–2016 model years.

Manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by "pooling" California and specified State vehicle sales; (2) revise its standards for 2012–2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California's standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal CAFE program to demonstrate compliance with the AB 1493 regulations (CARB 2009, http://www.arb.ca.gov/regact/2009/ghgpv09/ghgpvisor.pdf) both of these programs are aimed at light-duty auto and light-duty trucks.

Executive Order S-3-05:

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change (35). It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80% below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

California Assembly Bill 32 (AB 32):

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020 (3). This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes

guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMTs (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 MMTs of CO2 equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT for 2000 and 532 MMT for 2010. "Business as usual" conditions (without the 28.4 percent reduction to be implemented by CARB regulations) for 2020 were projected to be 596 MMTs.

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plants, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source CO2 emissions in the State.

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. Implementation of individual measures must begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020.

Table 2-3 shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMTons of CO2e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMTons tons of CO2e (or approximately 1.2 percent of the GHG reduction target).

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and

TABLE 2-3: SCOPING PLAN GHG REDUCTION MEASURES TOWARDS 2020 TARGET

Recommended Reduction Measures	*Reductions Counted toward 2020 Target of 169 MMT CO2e*	*Percentage of Statewide 2020 Target*
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

Source: CARB. 2008, MMTons CO2e: million metric tons of CO2e

[1]Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

[2]According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and California Climate Action Team early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.

In connection with its preparation of the August 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, CARB released revised estimates of the 2020 emissions level projection in light of the economic recession and the availability of updated information from development of measure-specific regulations. Based on the new economic data, CARB determined the 2020 emissions level projection in the BAU condition would be reduced from 596 metric tons of CO2 equivalent (MTCO2e) to 545 MTCO2e. (36) Under this scenario, achieving the 1990 emissions level in 2020 would require a reduction of GHG emissions of 118 MTCO2e, or 21.7 percent (down from 28.5 percent), from the BAU condition.

When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 MTCO2e. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 MTCO2e, or approximately 16 percent (down from 28.5 percent), from the BAU condition. (36) (37)

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The 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 Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities Climate for the next several years. The 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 (ARB 2014).

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 ARB 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, ARB 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. ARB 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

(Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuels Standard. In addition, ARB factored into the 2020 BAU inventory emissions reductions associated with 33-percent Renewable Energy Portfolio Standard (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 climate action plans, the updated inventory without regulations was also included in the Supplemental FED. The ARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated ARB 2020 BAU projection in the Supplemental FED is 545 $MMTCO_2e$. Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, ARB 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 (2008).

On January 20, 2017, ARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update would reflect 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 Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. It should be noted the proposed Second Update is undergoing a review period and has not yet been adopted.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the 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 MTCO2e 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 MTCO2e 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. Though 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 (38) (39).

California Senate Bill No. 1368 (SB 1368):

In 2006, the State Legislature adopted Senate Bill 1368 ("SB 1368"), which was subsequently signed into law by the Governor (10). SB 1368 directs the California Public Utilities Commission ("CPUC") to adopt a greenhouse gas emission performance standard ("EPS") for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants.

Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368.

CEQA Guidelines

CEQA Guideline § 15064.4(a)"A lead agency shall have discretion to determine, in the context of a particular project, whether to: 1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or 2. Rely on a qualitative analysis or performance based standards."

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in a CEQA compliance document when a Project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emission are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support determination that a Project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

CEQA emphasizes that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis. (See CEQA Guidelines Section 15130(f)).

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of greenhouse gas emissions:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Executive Order S-01-07:

On January 18, 2007 California Governor Arnold Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California's transportation fuel by at least ten percent by 2020 (40). The order also requires that a California specific Low Carbon Fuel Standard be established for transportation fuels.

Senate Bills 1078 and 107 and Executive Order S-14-08:

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20% of their supply from renewable sources by 2017 (41). SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010 (40). In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33% renewable power by 2020 (42).

Executive Order B-30-15:

In January 2015, Governor Brown, in his inaugural address and annual report to the Legislature, established supplementary goals which would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50% measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

On April 29, 2015 California Governor Jerry Brown, through Executive Order B-30-15 ("BEO") states a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030.

The BEO sets an ambitious new Statewide GHG emissions reduction target of 40% below 1990 levels by 2030 as a "mid-term" benchmark needed to achieve the 80% below 1990 levels by 2050 (43).

Senate Bill 32:

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide greenhouse gas emissions to 40% 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 greenhouse gas reduction target of 80% below 1990 levels by 2050 (44) (45).

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the 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 MTCO2e 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 MTCO2e 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. Though 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 (38) (39).

The Project reduces its GHG emissions to the maximum extent feasible as discussed in this document. At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15 and SB 32.

Additionally, as described previously, 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 greenhouse gas emissions reduction targets, including that established under Executive Order S-3-05, Executive Order B-30-15, or SB 32.

Based on the foregoing, 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 greenhouse gas emissions in the 2030 and 2050 horizon years are less than significant.

Senate Bill 375:

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable

communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035.

These reduction targets will be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

This law also extends the minimum time period for the regional housing needs allocation cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or county land use policies (including general plans) are not required to be consistent with the regional transportation plan (and associated SCS or APS). However, new provisions of CEQA would incentivize (through streamlining and other provisions) qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

The 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the SCAG region was prepared to ensure that the Southern California region attains the per capita vehicle miles targets for passenger vehicles identified by CARB, as required by Senate Bill 375 (46). The Project would be consistent with the plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The Project's consistency with the proposed RTP strategies would therefore not conflict with GHG reduction goals set forth in the SCAG 2016 RTP/SCS. South Coast Air Quality Management District Recommendations for Significance Thresholds:

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group." The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; non-residential; industrial; etc (47). However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of carbon dioxide equivalent (MTCO2e) as a screening numerical threshold for stationary sources. More importantly it should be noted that when setting the 10,000 MTCO2e threshold, the SCAQMD did not consider mobile sources (vehicular travel), rather the threshold is based mainly on stationary source generators such as boilers, refineries, power plants, etc.

Therefore it would be misleading to apply a threshold that was developed without consideration for mobile sources to a Project where the majority of emissions are related to mobile sources.

In September 2010 (48), the Working Group released additional revisions that consist of the following recommended tiered approach:

- Tier 1 consists of evaluating whether or not the Project qualifies for applicable CEQA exemptions.
- Tier 2 consists of determining whether or not a Project is consistent with a greenhouse gas reduction plan. If a Project is consistent with a greenhouse gas reduction plan, it would not have a significant impact.
- Tier 3 consists of screening values at the discretion of the lead agency; however they should be consistent for all projects within its jurisdiction. Project-related construction emissions should be amortized over 30 years and should be added back the Project's operational emissions. The following thresholds are proposed for consideration:
    - 3,000 MTCO2e per year for all land use types

      or
    - 3,500 MTCO2e per year for residential; 1,400 MTCO2e per year for commercial; or 3,000 MTCO2e per year for mixed-use projects
- Tier 4 has the following options:
    - Option 1: Reduce emissions from business as usual by a certain percentage (currently undefined)
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: A project-level efficiency target of 4.8 MTCO2e per service population as a 2020 target and 3.0 MTCO2e per service population as a 2035 target. The recommended plan-level target for 2020 is 6.6 MTCO2e and the plan level target for 2035 is 4.1 MTCO2e
- Tier 5 involves mitigation offsets to achieve target significance thresholds

The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions. However, these rules address boilers and process heater, forestry, and manure management projects, none of which are required by the Project

2.8 CONSISTENCY WITH CARB SCOPING PLAN

Table 2-5 below, presents the 39 Recommended Actions (qualitative measures) identified to date by CARB in its Climate Change Proposed Scoping Plan. Of the 39 measures identified, those that would be considered to be applicable to the Project would primarily be those actions related to transportation, electricity and natural gas use, green building design and industrial uses. Consistency of the Project with these measures is evaluated by each source-type measure below. Table 3-5 identifies which CARB Recommended Actions apply to the Project, and of those, whether the Project is consistent therewith. A discussion of how the Project is consistent with each applicable CARB Recommended Action is set forth after Table 2-5.

TABLE 2-5: RECOMMENDED ACTIONS FOR CLIMATE CHANGED PROPOSED SCOPING PLAN

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	NO	NO
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	NO	NO
T-3	Transportation	Regional Transportation-Related GHG Targets	NO	NO
T-4	Transportation	Vehicle Efficiency Measures	NO	NO
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	NO	NO
T-6	Transportation	Goods-movement Efficiency Measures	NO	NO
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	NO	NO
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	NO	NO
T-9	Transportation	High Speed Rail	NO	NO
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	YES	NO
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	NO	NO
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	NO	NO
E-4	Electricity and Natural Gas	Million Solar Roofs	YES	NO
CR-1	Electricity and Natural Gas	Energy Efficiency	YES	NO
CR-2	Electricity and Natural Gas	Solar Water Heating	NO	NO
GB-1	Green Buildings	Green Buildings	YES	NO
W-1	Water	Water Use Efficiency	YES	NO
W-2	Water	Water Recycling	NO	NO
W-3	Water	Water System Energy Efficiency	YES	NO
W-4	Water	Reuse Urban Runoff	NO	NO
W-5	Water	Increase Renewable Energy Production	NO	NO
W-6	Water	Public Goods Charge (Water)	NO	NO
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	YES	NO
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	NO	NO
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	NO	NO
I-4	Industry	Refinery Flare Recovery Process Improvements	NO	NO
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	NO	NO
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	NO	NO
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	NO	NO
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	NO	NO
F-1	Forestry	Sustainable Forest Target	NO	NO
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	NO	NO
H-2	High Global Warming Potential Gases	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	NO	NO
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	NO	NO
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	NO	NO
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	NO	NO
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	NO	NO
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	NO	NO
A-1	Agriculture	Methane Capture at Large Dairies	NO	NO

SOURCE: CARB, 2008.

Discussion of the applicability of each measure and Project consistency with or support of its implementation follows. It also noted that certain measures and enforcement actions listed below are beyond the scope of control of the Project. Notwithstanding implementation and enforcement of these measures by the State or other responsible entity will act to reduce areawide GHG emissions.

Transportation

CARB's Scoping Plan identifies nine transportation-related recommended actions. Action T-1 concerns improvements to light-duty vehicle technology for the purposes of reducing GHG emissions. This action focuses on legislating improved controls for vehicle manufacturers and would not generally be considered applicable to the proposed Project. Implementation of the Pavley standards is dependent on implementation by the State on vehicle fuel economy standards.

Implementation of such a standard is not within the purview of this Project. Therefore, the proposed Project would not conflict with measures concerning the Pavley standards.

Action T-2 concerns implementation of a low carbon fuel standard. To reduce the carbon intensity of transportation fuels, CARB is developing a Low Carbon Fuel Standard (LCFS), which would reduce the carbon intensity of California's transportation fuels by at least ten percent by 2020 as called for by Governor Schwarzenegger in Executive Order S-01-07. LCFS will incorporate compliance mechanisms that provide flexibility to fuel providers in how they meet the requirements to reduce greenhouse gas emissions.

Implementation of such a standard is not within the purview of this Project. Therefore, the proposed Project would not conflict with measures concerning the use of low carbon fuels.

Action T-3 addresses regional transportation targets for reducing GHG emissions. SB 375 requires CARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035. It sets forth a collaborative process to establish these targets, including the appointment by CARB of a Regional Targets Advisory Committee to recommend factors to be considered and methodologies for setting greenhouse gas emissions reduction targets. SB 375 also provides incentives – relief from certain California Environmental Quality Act (CEQA) requirements for development projects that are consistent with regional plans that achieve the targets.

Implementation of such a standard is not within the purview of this Project. Therefore, the proposed Project would not conflict with measures concerning SB375.

Action T-4 is concerned with vehicle efficiency measures. The California Integrated Waste Management Board (CIWMB) with various partners continues to conduct a public awareness campaign to promote sustainable tire practices. CARB is pursuing a regulation to ensure that tires are properly inflated when vehicles are serviced. In addition, CEC in consultation with CIWMB is developing an efficient tire program focusing first on data gathering and outreach, then on potential adoption of minimum fuel-efficient tire standards, and lastly on the development of consumer information requirements for replacing tires. CARB is also pursuing

ways to reduce engine load via lower friction oil and reducing the need for air conditioner use. ARB is actively engaged in the regulatory development process for the tire inflation component of this measure.

Implementation of such a standard is not within the purview of this Project. Therefore, the proposed Project would not conflict with applicable measures.

Action T-5 addresses electrification of ships at ports and is not applicable to the proposed Project.

Action T-6 also primarily addresses port operations and is not applicable to the proposed Project.

Action T-7 requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology.

Implementation of such a standard is not within the purview of the proposed Project since various trucks fleets from numerous commercial entities may access the site. Therefore, the proposed Project would not conflict with this measure.

Action T-8 focuses on hybridization of medium- and heavy-duty vehicles. The implementation approach to Action T-8 is to adopt a regulation and/or incentive program that reduces GHG emissions by encouraging hybrid technology as applied to vocational applications that have significant urban, stop-and-go driving, idling, and power take-off operations in their duty cycle. Such applications include parcel delivery trucks and vans.

Implementation of such a standard is not within the purview of the proposed Project since various trucks fleets from numerous commercial entities may access the site. Therefore, the proposed Project would not conflict with this measure.

Action T-9 concerns implementation of a high speed rail system. This measure is not applicable to the Project.

Electricity and Natural Gas

Action E-1/CR-1, together with Action GB-1 (Green Building), aims to reduce electricity demand by increased efficiency of Utility Energy Programs and adoption of more stringent building and appliance standards.

The Project will comply with or surpass incumbent Title 24 Energy Efficiency Standards. Therefore, the proposed Project would not conflict with this measure.

Action E-2 encourages an increase in the use of combined heat and power (CHP) use, or co-generation, facilities. California has supported CHP for many years, but market and other barriers continue to keep CHP from reaching its full market potential. Increasing the deployment of efficient CHP will require a multi-pronged approach that includes addressing significant barriers and instituting incentives or mandates where appropriate.

Implementation of such a standard is not within the purview of the proposed Project; therefore, the proposed Project would not conflict with this measure.

Action E-3 concerns Renewable Portfolio Standards for utilities and does not apply to development projects.

Action E-4 strives to promote solar generated electricity.

Project building designs will accommodate renewable energy sources, such as photovoltaic solar electricity systems, appropriate to their architectural design(s). The Project would therefore not conflict with the recommended measure.

Action CR-2 strives to promote solar water heaters (SWH). The ARB recommends that California pursue approaches with the goal of developing a viable SWH industry for 2020 and beyond.

Implementation of such a standard is not within the purview of the Project; therefore, the proposed Project would not conflict with this measure.

Water Use

Implementation of all but two of the Recommended Actions related to water use are not within the purview of the proposed Project. The two measures that apply are measures W-1 (Water Use Efficiency) and W-3 (Water System Energy Efficiency). However, since the proposed Project would not exceed the audit threshold of 25,000 MT CO_2 (49) from on-site combustion and related activities, the proposed Project is consistent with and would not obstruct the recommended actions.

Industrial Use

All but one of the Recommended Actions related to industrial use are specific to oil and gas extraction, refining and transmission and are not applicable to the proposed Project. The one other Action I-1 targets large emitters of GHGs (in excess of 0.5 million metric tons (MMT)/year of CO_2E (equivalent)) for auditing[3] (50). Because the proposed Project would not exceed the audit threshold, as set forth in Section 3.0, the proposed Project is consistent with and would not obstruct the recommended actions.

[3] Certain "covered sectors" of activities in California account for 85% of GHG emissions. Each source in these sectors will be subject to a system of declining GHG emissions allowances issued by CARB under a total emissions cap, as well as an allowance trading system. The Plan's lynch-pin is a cap-and-trade program that would apply to the electricity sector, the transportation sector, the commercial and residential sector, and large industrial sources (those emitting more than 0.5 million metric tons per year of carbon dioxide ("CO2") equivalents).

3 PROJECT GREENHOUSE GAS IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant greenhouse gas 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 greenhouse gas 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 air quality if it would:

- Generate greenhouse gas 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 greenhouse gases?

The City of Eastvale does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. The AQMD's adopted numerical threshold of 10,000 MTCO2e per year for industrial stationary source emissions is selected as the significance criterion. The AQMD-adopted industrial threshold was selected by the City because the proposed Project is analogous to an industrial use much more closely than any other land use such as commercial or residential in terms of its expected operating characteristics. The Project proposes one warehouse building with loading bays and fenced truck courts that are expected to house one or more businesses that serve mid- stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, analysis of the Project's traffic generation relied upon in this report is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, 2012 for industrial and warehouse uses. Also, 10,000 MTCO2e has been used as the significance threshold by many local government lead agencies for logistics warehouse projects throughout the SCAG region since the AQMD adopted this threshold for its own use. Further, to ensure that the threshold is conservative in its application, although the AQMD uses their adopted 10,000 MTCO2e threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 MTCO2e threshold used in this report is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

Use of this threshold is also consistent with guidance provided in the CAPCOA *CEQA and Climate Change* handbook, as such the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD

using this method is 10,000 metric tons carbon dioxide equivalent (MTCO2E) per year for industrial projects. This threshold is based on the review of 711 CEQA projects.

3.3 PROJECT RELATED GREENHOUSE GAS EMISSIONS

CEQA Guidelines 15064.4 (b) (1) states that a lead agency may use a model or methodology to quantify greenhouse gas emissions associated with a project (51).

On October 14, 2016, 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™) v2016.3.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO_x, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (52). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1.

3.4 CONSTRUCTION AND OPERATIONAL LIFE-CYCLE ANALYSIS

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. 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 a 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 (53). 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.

3.5 CONSTRUCTION EMISSIONS

Construction is expected to commence in October 2017 and will last through January 2018. The duration of construction activity was estimated based on information provided by the Project applicant and a 2018 opening year. The construction schedule utilized in the analysis, shown in Table 3-1, represents a "worst-case" analysis scenario; should construction commence later than October 2017 through January 2018; emissions would be less than reported herein because emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[4] A detailed summary of the

[4] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3, Table 3.4 "OFFROAD

construction schedule, shown in Table 3-2, was estimated based on information provided by the Project applicant. The site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity and associated equipment both represent a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity. It is our understanding the Project's earthwork quantifies will be balanced, requiring 27,750 cubic yards of both import and export soil.

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

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 greenhouse gas emissions for the construction activities, dividing it by the 30-year project life then adding that number to the annual operational phase GHG emissions (54). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of CO2, CH4, and N2O from the following primary sources:

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

Equipment Emission Factors" 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.

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 the CalEEMod model.

3.6.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod™ default parameters were used.

3.6.3 MOBILE SOURCE EMISSIONS

Vehicles

Project mobile source air quality impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the report, S. Milliken Distribution Center Traffic Impact Analysis (Urban Crossroads) 2017 were utilized in this analysis (2). Per the *S. Milliken Distribution Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc. the Project is expected to generate a net total of approximately 470 trip-ends per day (actual vehicles). The net Project trip generation includes 178 truck trip-ends per day. This greenhouse gas study relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck emissions associated with the Project.

The SCAQMD is currently recommending the use of the ITE Trip Generation manual in conjunction with their truck mix by axle-type to better quantify trip rates associated with local warehouse and distribution projects, as truck emission represent more than 90 percent of air quality impacts from these projects. This recommended procedure has been utilized for the purposes of this analysis in effort to be consistent with other technical studies being prepared for the Project. The percentage of trucks has been determined from the table shown on page 267 of the ITE *Trip Generation* manual. As shown on page 267, the truck trip generation rate for weekday daily traffic is 0.64 or 38.1% of the total traffic. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. For the purposes of this analysis, the

percentage of trucks, by axle type, were obtained from the SCAQMD interim recommended truck mix. The SCAQMD has recently performed surveys of existing facilities and compiled the data to provide interim guidance on the mix of heavy trucks for these types of high-cube warehousing/distribution facilities. Based on this interim guidance from the SCAQMD, the following truck fleet mix was utilized for the purposes of estimating the truck trip generation for the site: 22.03% of the total trucks as 2-axle trucks, 17.76% of the total trucks as 3-axle trucks, and 60.31% of the total trucks as 4+-axle trucks.

3.5.3.1 Trip Length

Background

A technical deficiency inherent in calculating the projected vehicle emissions associated with any project is related to the estimation of trip length and vehicle miles traveled (VMT). VMT for a given project is calculated by the total number of vehicle trips to/from the Project x average trip length. This method of estimating VMT for use in calculating vehicle emissions likely results in the over-estimation and double-counting of emissions because, for a distribution warehouse center such as the Project, the land use is likely to attract (divert) existing vehicle trips that are already on the circulation system as opposed to generating new trips. In this regard, the Project would, to a large extent, redistribute existing mobile-source emissions rather than generate additional emissions within the Basin. As such, the estimation of the S. Milliken Distribution Center Project's vehicular-source emissions are likely overstated in that no credit for, or reduction in, emissions is assumed based on diversion of existing trips.

Provided below is a summary of the VMT recommendations of the SCAQMD and SCAG, followed by a description of the methodology used to calculate the VMT rates used in this GHGA.

SCAQMD Recommendation

In the last five years, the SCAQMD has provided numerous comments on the trip length for warehouse/distribution and industrial land use projects (55). The SCAQMD asserts that the model-default trip length in CalEEMod™ and the URBan EMISsions (URBEMIS) 2007 model (version 9.2.4) would underestimate emissions. The SCAQMD asserts that for warehouse, distribution center, and industrial land use projects, most of the heavy-duty trucks would be hauling consumer goods, often from the Ports of Long Beach and Los Angeles (POLA and POLB) and/or to destinations outside of California. The SCAQMD states that for this reason, the CalEEMod™ and the URBan EMISsions model default trip length (approximately 12.6 miles) would not be representative of activities at like facilities. The SCAQMD generally recommends the use of a 40-mile one-way trip length.

Southern California Association of Government (SCAG) Heavy Duty Truck Model

SCAG is comprised of six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 190 cities in Southern California, and is the organization charged with addressing and resolving short- and long-term regional policy issues. The SCAG region also consists of 14 sub-regional entities recognized by the Regional Council as partners in the

regional policy planning process. The SCAG region has more than 19 million residents and encompasses more than 38,000 square miles, representing the largest and most diverse region in the country.

SCAG maintains a regional transportation model. In its most recent (2008) transportation validation for the 2003 Regional Model, SCAG indicates the average internal truck trip length for the SCAG region is 5.92 miles for Light Duty Trucks, 13.06 miles for Medium Duty Trucks, and 24.11 miles for Heavy Duty Trucks.

Approach for Analysis of the Project

Trip lengths and VMT estimates employed in this AQIA report generate vehicular-source emissions that would represent a maximum impact scenario. Other CEQA compliance documents for similar land use projects within the region have utilized these same or similar estimates. Though the VMT analyzed in this analysis may differ from the Project's traffic impact analysis, to maintain analytic consistency and establish the maximum impact scenario noted above, the following approach has been utilized in calculating emissions associated with vehicles accessing the Project. This approach is consistent with professional industry practice (56) (57) (58).

For passenger car trips, the CalEEMod default for a one-way trip length of 16.6 miles was assumed. For heavy duty trucks, the SCAQMD recommendation of a 40.0 mile one-way trip length was assumed.

Two separate model runs were utilized in order to more accurately model emissions resulting from vehicle operations. The first run analyzed passenger car emissions, which incorporated a default trip length of 16.6 miles for passenger cars and a fleet mix of 100% Light-Duty-Auto vehicles (LDA). The second run analyzed truck emissions, which incorporated an average truck trip length of 40 miles. A fleet mix of 22.03% LHD, 17.66% MHD, and 60.31% HHD was used for High-Cube Warehouse. The estimated emissions resulting from vehicle operations are summarized in Table 3-7 (presented later in this report.) Detailed emission calculations are provided in Appendix 3.1.

3.6.4 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 proposed Project were calculated by CalEEMod using default parameters.

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. Water demand rates based on CalEEMod defaults are utilized in this analysis.

3.6.6 ON-SITE EQUIPMENT EMISSIONS

As part of the Project's design, all on-site indoor and outdoor cargo handling equipment (CHE) (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) will be powered by non-combustion engines (e.g. electric). Since there are no exhaust emissions associated with the equipment, for purposes of the Project, emissions associated with yard trucks and forklifts are not included in the emissions totals.

3.7 EMISSIONS SUMMARY

The Project will result in approximately 806.61 MTCO2e per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 4,771.03 MTCO2e 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 shown on Table 3-1, the Project has the potential to generate a total of approximately 5,577.64 MTCO2e per year. As such, the Project would not exceed the SCAQMD's numeric threshold of 10,000 MTCO2e if it were applied. Thus, the Project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions.

TABLE 3-1: PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	23.68	0.00165	0.00	23.76
Area	0.0171	5.00E-05	0.00	0.0183
Energy	291.62	0.0114	2.79E-03	292.74
Mobile Sources (Trucks)	3,541.32	0.1787	0.00	3,545.79
Mobile Sources (Passenger Cars)	1,224.49	0.0298	0.00	1,225.24
Waste	53.43	3.16	0.00	132.36
Water Usage	289.18	2.12	0.0521	357.73
Total CO_2E (All Sources)	**5,577.64**			

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4 FINDINGS & CONCLUSIONS

The City of Eastvale does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. The AQMD's adopted numerical threshold of 10,000 MTCO2e per year for industrial stationary source emissions is selected as the significance criterion. The AQMD-adopted industrial threshold was selected by the City because the proposed Project is analogous to an industrial use much more closely than any other land use such as commercial or residential in terms of its expected operating characteristics. The Project proposes one warehouse building with loading bays and fenced truck courts that is expected to house one or more businesses that serve mid- stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, analysis of the Project's traffic generation relied upon in this report is based on the ITE Trip Generation Manual, 9th Edition, 2012 for industrial and warehouse uses. Also, 10,000 MTCO2e has been used as the significance threshold by many local government lead agencies for logistics projects throughout the SCAG region since the AQMD adopted this threshold for its own use. Further, to ensure that the threshold is conservative in its application, although the AQMD uses their adopted 10,000 MTCO2e threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 MTCO2e threshold used in this report is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

Use of this threshold is also consistent with guidance provided in the CAPCOA *CEQA and Climate Change* handbook, as such the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 MTCO2e per year for industrial projects. This threshold is based on the review of 711 CEQA projects.

The Project will result in approximately 806.61 MTCO2e per year from construction, area, energy, waste, and water usage. In addition, the Project has the potential to result in an additional 4,771.03 MTCO2e 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 shown on Table 4-1, the Project has the potential to generate a total of approximately 5,577.64 MTCO2e per year. As such, the Project would not exceed the SCAQMD's numeric threshold of 10,000 MTCO2e if it were applied. Thus, the Project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions.

TABLE 4-1: PROJECT GREENHOUSE GAS EMISSIONS (ANNUAL)

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	23.68	0.00165	0.00	23.76
Area	0.0171	5.00E-05	0.00	0.0183
Energy	291.62	0.0114	2.79E-03	292.74
Mobile Sources (Trucks)	3,541.32	0.1787	0.00	3,545.79
Mobile Sources (Passenger Cars)	1,224.49	0.0298	0.00	1,225.24
Waste	53.43	3.16	0.00	132.36
Water Usage	289.18	2.12	0.0521	357.73
Total CO_2E (All Sources)	**5,577.64**			

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6 CERTIFICATION

The contents of this GHGA represent an accurate depiction of the greenhouse gas impacts associated with the proposed S. Milliken Distribution Center Project. The information contained in this greenhouse gas 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

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
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 EMISSIONS MODEL OUTPUTS

3100 Milliken Avenue

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	280.00	1000sqft	15.80	280,000.00	0
Parking Lot	410.00	Space	3.69	164,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2018
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

Project Characteristics -

Land Use - Based on Project site plan

Construction Phase - Based on an Opening Year of 2018

Off-road Equipment - Based on an 8 hour work day

Off-road Equipment -

Off-road Equipment - Based on an 8 hour work day

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

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

Grading -

Architectural Coating - No more than 50 gram/liter of VOC

Vehicle Trips - Trucks only

Fleet Mix - Passenger cars only

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	300.00	240.00
tblConstructionPhase	PhaseEndDate	4/12/2019	12/21/2018
tblConstructionPhase	PhaseEndDate	2/15/2019	10/26/2018
tblConstructionPhase	PhaseEndDate	12/22/2017	11/24/2017
tblConstructionPhase	PhaseEndDate	3/15/2019	11/23/2018
tblConstructionPhase	PhaseEndDate	11/10/2017	10/13/2017
tblConstructionPhase	PhaseStartDate	3/16/2019	11/24/2018
tblConstructionPhase	PhaseStartDate	12/23/2017	11/25/2017

tblConstructionPhase	PhaseStartDate	11/11/2017	10/14/2017
tblConstructionPhase	PhaseStartDate	2/16/2019	10/27/2018
tblConstructionPhase	PhaseStartDate	10/28/2017	10/1/2017
tblFleetMix	HHD	0.03	0.60
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.17
tblFleetMix	LHD2	5.8790e-003	0.00
tblFleetMix	MCY	4.6560e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.0290e-003	0.00
tblFleetMix	MHD	0.02	0.23
tblFleetMix	OBUS	1.9580e-003	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	UBUS	2.1130e-003	0.00
tblLandUse	LotAcreage	6.43	15.80
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	ST_TR	1.68	0.64
tblVehicleTrips	SU_TR	1.68	0.64
tblVehicleTrips	WD_TR	1.68	0.64

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					
2017	0.1918	2.0824	1.1386	2.2800e-003	0.2825	0.0919	0.3744	0.1160	0.0850	0.2011	0.0000	210.4366	210.4366	0.0495	0.0000	211.6736
2018	1.1350	3.9735	3.3981	7.7800e-003	0.2745	0.1931	0.4677	0.0741	0.1813	0.2554	0.0000	710.2707	710.2707	0.0965	0.0000	712.6834
Maximum	**1.1350**	**3.9735**	**3.3981**	**7.7800e-003**	**0.2825**	**0.1931**	**0.4677**	**0.1160**	**0.1813**	**0.2554**	**0.0000**	**710.2707**	**710.2707**	**0.0965**	**0.0000**	**712.6834**

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					
2017	0.1918	2.0824	1.1386	2.2800e-003	0.1319	0.0919	0.2238	0.0511	0.0850	0.1361	0.0000	210.4364	210.4364	0.0495	0.0000	211.6734
2018	1.1350	3.9735	3.3981	7.7800e-003	0.2745	0.1931	0.4677	0.0741	0.1813	0.2554	0.0000	710.2703	710.2703	0.0965	0.0000	712.6830
Maximum	**1.1350**	**3.9735**	**3.3981**	**7.7800e-003**	**0.2745**	**0.1931**	**0.4677**	**0.0741**	**0.1813**	**0.2554**	**0.0000**	**710.2703**	**710.2703**	**0.0965**	**0.0000**	**712.6830**

	ROG	NOx	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**	**27.04**	**0.00**	**17.89**	**34.16**	**0.00**	**14.23**	**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	10-1-2017	12-31-2017	2.2749	2.2749
2	1-1-2018	3-31-2018	1.2581	1.2581
3	4-1-2018	6-30-2018	1.2661	1.2661
4	7-1-2018	9-30-2018	1.2800	1.2800
		Highest	2.2749	2.2749

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Energy	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	291.6200	291.6200	0.0114	2.7900e-003	292.7357
Mobile	0.4389	12.5748	3.2008	0.0366	1.0688	0.0994	1.1681	0.3017	0.0950	0.3967	0.0000	3,541.3231	3,541.3231	0.1787	0.0000	3,545.7910
Waste						0.0000	0.0000		0.0000	0.0000	53.4272	0.0000	53.4272	3.1575	0.0000	132.3637
Water						0.0000	0.0000		0.0000	0.0000	20.5422	268.6328	289.1750	2.1210	0.0521	357.7291
Total	**1.5973**	**12.6030**	**3.2334**	**0.0368**	**1.0688**	**0.1015**	**1.1703**	**0.3017**	**0.0972**	**0.3989**	**73.9694**	**4,101.5931**	**4,175.5625**	**5.4686**	**0.0549**	**4,328.6378**

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Energy	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	291.6200	291.6200	0.0114	2.7900e-003	292.7357
Mobile	0.4389	12.5748	3.2008	0.0366	1.0688	0.0994	1.1681	0.3017	0.0950	0.3967	0.0000	3,541.3231	3,541.3231	0.1787	0.0000	3,545.7910
Waste						0.0000	0.0000		0.0000	0.0000	53.4272	0.0000	53.4272	3.1575	0.0000	132.3637
Water						0.0000	0.0000		0.0000	0.0000	20.5422	268.6328	289.1750	2.1210	0.0521	357.7291
Total	**1.5973**	**12.6030**	**3.2334**	**0.0368**	**1.0688**	**0.1015**	**1.1703**	**0.3017**	**0.0972**	**0.3989**	**73.9694**	**4,101.5931**	**4,175.5625**	**5.4686**	**0.0549**	**4,328.6378**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2017	10/13/2017	5	10	
2	Grading	Grading	10/14/2017	11/24/2017	5	30	
3	Building Construction	Building Construction	11/25/2017	10/26/2018	5	240	
4	Paving	Paving	10/27/2018	11/23/2018	5	20	
5	Architectural Coating	Architectural Coating	11/24/2018	12/21/2018	5	20	

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 105

Acres of Paving: 3.69

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 420,000; Non-Residential Outdoor: 140,000; Striped Parking Area: 9,840 (Architectural Coating – sqft)

OffRoad Equipment

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

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
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	186.00	73.00	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
Paving	6	15.00	0.00	0.00	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

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

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					0.1009	0.0000	0.1009	0.0508	0.0000	0.0508	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3852	0.1253	2.8000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	26.4327	26.4327	8.1000e-003	0.0000	26.6352
Total	**0.0322**	**0.3852**	**0.1253**	**2.8000e-004**	**0.1009**	**0.0169**	**0.1178**	**0.0508**	**0.0155**	**0.0663**	**0.0000**	**26.4327**	**26.4327**	**8.1000e-003**	**0.0000**	**26.6352**

3.2 Site Preparation - 2017

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

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					0.0394	0.0000	0.0394	0.0198	0.0000	0.0198	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3852	0.1253	2.8000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	26.4327	26.4327	8.1000e-003	0.0000	26.6351
Total	**0.0322**	**0.3852**	**0.1253**	**2.8000e-004**	**0.0394**	**0.0169**	**0.0562**	**0.0198**	**0.0155**	**0.0353**	**0.0000**	**26.4327**	**26.4327**	**8.1000e-003**	**0.0000**	**26.6351**

3.2 Site Preparation - 2017

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

3.3 Grading - 2017

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					0.1460	0.0000	0.1460	0.0557	0.0000	0.0557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0974	1.2048	0.5937	1.0700e-003		0.0498	0.0498		0.0458	0.0458	0.0000	99.4880	99.4880	0.0305	0.0000	100.2501
Total	**0.0974**	**1.2048**	**0.5937**	**1.0700e-003**	**0.1460**	**0.0498**	**0.1958**	**0.0557**	**0.0458**	**0.1015**	**0.0000**	**99.4880**	**99.4880**	**0.0305**	**0.0000**	**100.2501**

3.3 Grading - 2017

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	1.7900e-003	1.5000e-003	0.0160	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	3.2486	3.2486	1.2000e-004	0.0000	3.2517
Total	**1.7900e-003**	**1.5000e-003**	**0.0160**	**4.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3200e-003**	**8.7000e-004**	**3.0000e-005**	**9.0000e-004**	**0.0000**	**3.2486**	**3.2486**	**1.2000e-004**	**0.0000**	**3.2517**

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					0.0569	0.0000	0.0569	0.0217	0.0000	0.0217	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0974	1.2048	0.5937	1.0700e-003		0.0498	0.0498		0.0458	0.0458	0.0000	99.4879	99.4879	0.0305	0.0000	100.2500
Total	**0.0974**	**1.2048**	**0.5937**	**1.0700e-003**	**0.0569**	**0.0498**	**0.1067**	**0.0217**	**0.0458**	**0.0675**	**0.0000**	**99.4879**	**99.4879**	**0.0305**	**0.0000**	**100.2500**

3.3 Grading - 2017

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	1.7900e-003	1.5000e-003	0.0160	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	3.2486	3.2486	1.2000e-004	0.0000	3.2517
Total	**1.7900e-003**	**1.5000e-003**	**0.0160**	**4.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3200e-003**	**8.7000e-004**	**3.0000e-005**	**9.0000e-004**	**0.0000**	**3.2486**	**3.2486**	**1.2000e-004**	**0.0000**	**3.2517**

3.4 Building Construction - 2017

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	0.0415	0.3585	0.2429	3.6000e-004		0.0240	0.0240		0.0225	0.0225	0.0000	32.2513	32.2513	8.0800e-003	0.0000	32.4533
Total	**0.0415**	**0.3585**	**0.2429**	**3.6000e-004**		**0.0240**	**0.0240**		**0.0225**	**0.0225**	**0.0000**	**32.2513**	**32.2513**	**8.0800e-003**	**0.0000**	**32.4533**

3.4 Building Construction - 2017

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	4.4900e-003	0.1203	0.0323	2.4000e-004	5.7500e-003	1.0200e-003	6.7800e-003	1.6600e-003	9.8000e-004	2.6400e-003	0.0000	22.8645	22.8645	1.7100e-003	0.0000	22.9073
Worker	0.0139	0.0116	0.1237	2.8000e-004	0.0255	2.1000e-004	0.0257	6.7700e-003	2.0000e-004	6.9700e-003	0.0000	25.1768	25.1768	9.5000e-004	0.0000	25.2006
Total	**0.0184**	**0.1320**	**0.1560**	**5.2000e-004**	**0.0313**	**1.2300e-003**	**0.0325**	**8.4300e-003**	**1.1800e-003**	**9.6100e-003**	**0.0000**	**48.0413**	**48.0413**	**2.6600e-003**	**0.0000**	**48.1079**

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	0.0415	0.3585	0.2429	3.6000e-004		0.0240	0.0240		0.0225	0.0225	0.0000	32.2513	32.2513	8.0800e-003	0.0000	32.4532
Total	**0.0415**	**0.3585**	**0.2429**	**3.6000e-004**		**0.0240**	**0.0240**		**0.0225**	**0.0225**	**0.0000**	**32.2513**	**32.2513**	**8.0800e-003**	**0.0000**	**32.4532**

3.4 Building Construction - 2017

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	4.4900e-003	0.1203	0.0323	2.4000e-004	5.7500e-003	1.0200e-003	6.7800e-003	1.6600e-003	9.8000e-004	2.6400e-003	0.0000	22.8645	22.8645	1.7100e-003	0.0000	22.9073
Worker	0.0139	0.0116	0.1237	2.8000e-004	0.0255	2.1000e-004	0.0257	6.7700e-003	2.0000e-004	6.9700e-003	0.0000	25.1768	25.1768	9.5000e-004	0.0000	25.2006
Total	**0.0184**	**0.1320**	**0.1560**	**5.2000e-004**	**0.0313**	**1.2300e-003**	**0.0325**	**8.4300e-003**	**1.1800e-003**	**9.6100e-003**	**0.0000**	**48.0413**	**48.0413**	**2.6600e-003**	**0.0000**	**48.1079**

3.4 Building Construction - 2018

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	0.3064	2.7121	2.0180	3.1000e-003		0.1727	0.1727		0.1621	0.1621	0.0000	274.1159	274.1159	0.0684	0.0000	275.8256
Total	**0.3064**	**2.7121**	**2.0180**	**3.1000e-003**		**0.1727**	**0.1727**		**0.1621**	**0.1621**	**0.0000**	**274.1159**	**274.1159**	**0.0684**	**0.0000**	**275.8256**

3.4 Building Construction - 2018

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	0.0340	0.9702	0.2500	2.0300e-003	0.0495	6.9900e-003	0.0565	0.0143	6.6900e-003	0.0210	0.0000	196.0178	196.0178	0.0140	0.0000	196.3666
Worker	0.1063	0.0870	0.9332	2.3300e-003	0.2194	1.7800e-003	0.2212	0.0583	1.6400e-003	0.0599	0.0000	210.4480	210.4480	7.1800e-003	0.0000	210.6275
Total	**0.1403**	**1.0572**	**1.1832**	**4.3600e-003**	**0.2688**	**8.7700e-003**	**0.2776**	**0.0725**	**8.3300e-003**	**0.0809**	**0.0000**	**406.4658**	**406.4658**	**0.0211**	**0.0000**	**406.9941**

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	0.3064	2.7121	2.0180	3.1000e-003		0.1727	0.1727		0.1621	0.1621	0.0000	274.1156	274.1156	0.0684	0.0000	275.8253
Total	**0.3064**	**2.7121**	**2.0180**	**3.1000e-003**		**0.1727**	**0.1727**		**0.1621**	**0.1621**	**0.0000**	**274.1156**	**274.1156**	**0.0684**	**0.0000**	**275.8253**

3.4 Building Construction - 2018

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	0.0340	0.9702	0.2500	2.0300e-003	0.0495	6.9900e-003	0.0565	0.0143	6.6900e-003	0.0210	0.0000	196.0178	196.0178	0.0140	0.0000	196.3666
Worker	0.1063	0.0870	0.9332	2.3300e-003	0.2194	1.7800e-003	0.2212	0.0583	1.6400e-003	0.0599	0.0000	210.4480	210.4480	7.1800e-003	0.0000	210.6275
Total	**0.1403**	**1.0572**	**1.1832**	**4.3600e-003**	**0.2688**	**8.7700e-003**	**0.2776**	**0.0725**	**8.3300e-003**	**0.0809**	**0.0000**	**406.4658**	**406.4658**	**0.0211**	**0.0000**	**406.9941**

3.5 Paving - 2018

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	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	4.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.5 Paving - 2018

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	8.0000e-004	6.5000e-004	7.0000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5788	1.5788	5.0000e-005	0.0000	1.5801
Total	**8.0000e-004**	**6.5000e-004**	**7.0000e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5788**	**1.5788**	**5.0000e-005**	**0.0000**	**1.5801**

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	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	4.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.5 Paving - 2018

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	8.0000e-004	6.5000e-004	7.0000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5788	1.5788	5.0000e-005	0.0000	1.5801
Total	**8.0000e-004**	**6.5000e-004**	**7.0000e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5788**	**1.5788**	**5.0000e-005**	**0.0000**	**1.5801**

3.6 Architectural Coating - 2018

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	0.6603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0267	0.0247	4.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.4043	3.4043	3.2000e-004	0.0000	3.4124
Total	**0.6643**	**0.0267**	**0.0247**	**4.0000e-005**		**2.0100e-003**	**2.0100e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.4043**	**3.4043**	**3.2000e-004**	**0.0000**	**3.4124**

3.6 Architectural Coating - 2018

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	1.9700e-003	1.6100e-003	0.0173	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.8943	3.8943	1.3000e-004	0.0000	3.8976
Total	**1.9700e-003**	**1.6100e-003**	**0.0173**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1100e-003**	**0.0000**	**3.8943**	**3.8943**	**1.3000e-004**	**0.0000**	**3.8976**

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	0.6603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0267	0.0247	4.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.4043	3.4043	3.2000e-004	0.0000	3.4124
Total	**0.6643**	**0.0267**	**0.0247**	**4.0000e-005**		**2.0100e-003**	**2.0100e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.4043**	**3.4043**	**3.2000e-004**	**0.0000**	**3.4124**

3.6 Architectural Coating - 2018

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	1.9700e-003	1.6100e-003	0.0173	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.8943	3.8943	1.3000e-004	0.0000	3.8976
Total	**1.9700e-003**	**1.6100e-003**	**0.0173**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1100e-003**	**0.0000**	**3.8943**	**3.8943**	**1.3000e-004**	**0.0000**	**3.8976**

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	0.4389	12.5748	3.2008	0.0366	1.0688	0.0994	1.1681	0.3017	0.0950	0.3967	0.0000	3,541.3231	3,541.3231	0.1787	0.0000	3,545.7910
Unmitigated	0.4389	12.5748	3.2008	0.0366	1.0688	0.0994	1.1681	0.3017	0.0950	0.3967	0.0000	3,541.3231	3,541.3231	0.1787	0.0000	3,545.7910

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	179.20	179.20	179.20	2,433,230	2,433,230
Total	179.20	179.20	179.20	2,433,230	2,433,230

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
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	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.170000	0.000000	0.230000	0.600000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.544547	0.044708	0.198656	0.126890	0.018261	0.005879	0.019662	0.030939	0.001958	0.002113	0.004656	0.000702	0.001029

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	260.9892	260.9892	0.0108	2.2300e-003	261.9229
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	260.9892	260.9892	0.0108	2.2300e-003	261.9229
NaturalGas Mitigated	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
NaturalGas Unmitigated	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129

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					
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	574000	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
Total		**3.1000e-003**	**0.0281**	**0.0236**	**1.7000e-004**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**30.6308**	**30.6308**	**5.9000e-004**	**5.6000e-004**	**30.8129**

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					
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	574000	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
Total		**3.1000e-003**	**0.0281**	**0.0236**	**1.7000e-004**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**30.6308**	**30.6308**	**5.9000e-004**	**5.6000e-004**	**30.8129**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	144320	45.9834	1.9000e-003	3.9000e-004	46.1480
Unrefrigerated Warehouse-No Rail	674800	215.0057	8.8800e-003	1.8400e-003	215.7749
Total		**260.9892**	**0.0108**	**2.2300e-003**	**261.9229**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	144320	45.9834	1.9000e-003	3.9000e-004	46.1480
Unrefrigerated Warehouse-No Rail	674800	215.0057	8.8800e-003	1.8400e-003	215.7749
Total		**260.9892**	**0.0108**	**2.2300e-003**	**261.9229**

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Unmitigated	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183

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	0.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Total	**1.1553**	**8.0000e-005**	**8.9300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0171**	**0.0171**	**5.0000e-005**	**0.0000**	**0.0183**

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	0.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Total	**1.1553**	**8.0000e-005**	**8.9300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0171**	**0.0171**	**5.0000e-005**	**0.0000**	**0.0183**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	289.1750	2.1210	0.0521	357.7291
Unmitigated	289.1750	2.1210	0.0521	357.7291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	64.75 / 0	289.1750	2.1210	0.0521	357.7291
Total		**289.1750**	**2.1210**	**0.0521**	**357.7291**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	64.75 / 0	289.1750	2.1210	0.0521	357.7291
Total		**289.1750**	**2.1210**	**0.0521**	**357.7291**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	53.4272	3.1575	0.0000	132.3637
Unmitigated	53.4272	3.1575	0.0000	132.3637

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	263.2	53.4272	3.1575	0.0000	132.3637
Total		**53.4272**	**3.1575**	**0.0000**	**132.3637**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	263.2	53.4272	3.1575	0.0000	132.3637
Total		**53.4272**	**3.1575**	**0.0000**	**132.3637**

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

3100 Milliken Avenue

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	280.00	1000sqft	15.80	280,000.00	0
Parking Lot	410.00	Space	3.69	164,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2018
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

Project Characteristics -

Land Use - Based on Project site plan

Construction Phase - Based on an Opening Year of 2018

Off-road Equipment - Based on an 8 hour work day

Off-road Equipment -

Off-road Equipment - Based on an 8 hour work day

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

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

Grading -

Architectural Coating - No more than 50 gram/liter of VOC

Vehicle Trips - Passenger cars only

Fleet Mix - Passenger cars only

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	300.00	240.00
tblConstructionPhase	PhaseEndDate	4/12/2019	12/21/2018
tblConstructionPhase	PhaseEndDate	2/15/2019	10/26/2018
tblConstructionPhase	PhaseEndDate	12/22/2017	11/24/2017
tblConstructionPhase	PhaseEndDate	3/15/2019	11/23/2018
tblConstructionPhase	PhaseEndDate	11/10/2017	10/13/2017
tblConstructionPhase	PhaseStartDate	3/16/2019	11/24/2018
tblConstructionPhase	PhaseStartDate	12/23/2017	11/25/2017

tblConstructionPhase	PhaseStartDate	11/11/2017	10/14/2017
tblConstructionPhase	PhaseStartDate	2/16/2019	10/27/2018
tblConstructionPhase	PhaseStartDate	10/28/2017	10/1/2017
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.54	1.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8790e-003	0.00
tblFleetMix	MCY	4.6560e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.0290e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.9580e-003	0.00
tblFleetMix	SBUS	7.0200e-004	0.00
tblFleetMix	UBUS	2.1130e-003	0.00
tblLandUse	LotAcreage	6.43	15.80
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	ST_TR	1.68	1.04
tblVehicleTrips	SU_TR	1.68	1.04
tblVehicleTrips	WD_TR	1.68	1.04

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					
2017	0.1918	2.0824	1.1386	2.2800e-003	0.2825	0.0919	0.3744	0.1160	0.0850	0.2011	0.0000	210.4366	210.4366	0.0495	0.0000	211.6736
2018	1.1350	3.9735	3.3981	7.7800e-003	0.2745	0.1931	0.4677	0.0741	0.1813	0.2554	0.0000	710.2707	710.2707	0.0965	0.0000	712.6834
Maximum	**1.1350**	**3.9735**	**3.3981**	**7.7800e-003**	**0.2825**	**0.1931**	**0.4677**	**0.1160**	**0.1813**	**0.2554**	**0.0000**	**710.2707**	**710.2707**	**0.0965**	**0.0000**	**712.6834**

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					
2017	0.1918	2.0824	1.1386	2.2800e-003	0.1319	0.0919	0.2238	0.0511	0.0850	0.1361	0.0000	210.4364	210.4364	0.0495	0.0000	211.6734
2018	1.1350	3.9735	3.3981	7.7800e-003	0.2745	0.1931	0.4677	0.0741	0.1813	0.2554	0.0000	710.2703	710.2703	0.0965	0.0000	712.6830
Maximum	**1.1350**	**3.9735**	**3.3981**	**7.7800e-003**	**0.2745**	**0.1931**	**0.4677**	**0.0741**	**0.1813**	**0.2554**	**0.0000**	**710.2703**	**710.2703**	**0.0965**	**0.0000**	**712.6830**

	ROG	NOx	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**	**27.04**	**0.00**	**17.89**	**34.16**	**0.00**	**14.23**	**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	10-1-2017	12-31-2017	2.2749	2.2749
2	1-1-2018	3-31-2018	1.2581	1.2581
3	4-1-2018	6-30-2018	1.2661	1.2661
4	7-1-2018	9-30-2018	1.2800	1.2800
		Highest	2.2749	2.2749

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Energy	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	291.6200	291.6200	0.0114	2.7900e-003	292.7357
Mobile	0.1351	0.3400	3.9162	0.0135	1.4742	9.6300e-003	1.4838	0.3913	8.8900e-003	0.4002	0.0000	1,224.4906	1,224.4906	0.0298	0.0000	1,225.2362
Waste						0.0000	0.0000		0.0000	0.0000	53.4272	0.0000	53.4272	3.1575	0.0000	132.3637
Water						0.0000	0.0000		0.0000	0.0000	20.5422	268.6328	289.1750	2.1210	0.0521	357.7291
Total	**1.2935**	**0.3682**	**3.9487**	**0.0137**	**1.4742**	**0.0118**	**1.4860**	**0.3913**	**0.0111**	**0.4024**	**73.9694**	**1,784.7606**	**1,858.7300**	**5.3197**	**0.0549**	**2,008.0829**

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Energy	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	291.6200	291.6200	0.0114	2.7900e-003	292.7357
Mobile	0.1351	0.3400	3.9162	0.0135	1.4742	9.6300e-003	1.4838	0.3913	8.8900e-003	0.4002	0.0000	1,224.4906	1,224.4906	0.0298	0.0000	1,225.2362
Waste						0.0000	0.0000		0.0000	0.0000	53.4272	0.0000	53.4272	3.1575	0.0000	132.3637
Water						0.0000	0.0000		0.0000	0.0000	20.5422	268.6328	289.1750	2.1210	0.0521	357.7291
Total	**1.2935**	**0.3682**	**3.9487**	**0.0137**	**1.4742**	**0.0118**	**1.4860**	**0.3913**	**0.0111**	**0.4024**	**73.9694**	**1,784.7606**	**1,858.7300**	**5.3197**	**0.0549**	**2,008.0829**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/1/2017	10/13/2017	5	10	
2	Grading	Grading	10/14/2017	11/24/2017	5	30	
3	Building Construction	Building Construction	11/25/2017	10/26/2018	5	240	
4	Paving	Paving	10/27/2018	11/23/2018	5	20	
5	Architectural Coating	Architectural Coating	11/24/2018	12/21/2018	5	20	

Acres of Grading (Site Preparation Phase): 20

Acres of Grading (Grading Phase): 105

Acres of Paving: 3.69

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 420,000; Non-Residential Outdoor: 140,000; Striped Parking Area: 9,840 (Architectural Coating – sqft)

OffRoad Equipment

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

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
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	186.00	73.00	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
Paving	6	15.00	0.00	0.00	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

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2017

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					0.1009	0.0000	0.1009	0.0508	0.0000	0.0508	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3852	0.1253	2.8000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	26.4327	26.4327	8.1000e-003	0.0000	26.6352
Total	**0.0322**	**0.3852**	**0.1253**	**2.8000e-004**	**0.1009**	**0.0169**	**0.1178**	**0.0508**	**0.0155**	**0.0663**	**0.0000**	**26.4327**	**26.4327**	**8.1000e-003**	**0.0000**	**26.6352**

3.2 Site Preparation - 2017

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

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					0.0394	0.0000	0.0394	0.0198	0.0000	0.0198	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3852	0.1253	2.8000e-004		0.0169	0.0169		0.0155	0.0155	0.0000	26.4327	26.4327	8.1000e-003	0.0000	26.6351
Total	**0.0322**	**0.3852**	**0.1253**	**2.8000e-004**	**0.0394**	**0.0169**	**0.0562**	**0.0198**	**0.0155**	**0.0353**	**0.0000**	**26.4327**	**26.4327**	**8.1000e-003**	**0.0000**	**26.6351**

3.2 Site Preparation - 2017

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	5.4000e-004	4.5000e-004	4.7900e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9746	0.9746	4.0000e-005	0.0000	0.9755
Total	**5.4000e-004**	**4.5000e-004**	**4.7900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.9746**	**0.9746**	**4.0000e-005**	**0.0000**	**0.9755**

3.3 Grading - 2017

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					0.1460	0.0000	0.1460	0.0557	0.0000	0.0557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0974	1.2048	0.5937	1.0700e-003		0.0498	0.0498		0.0458	0.0458	0.0000	99.4880	99.4880	0.0305	0.0000	100.2501
Total	**0.0974**	**1.2048**	**0.5937**	**1.0700e-003**	**0.1460**	**0.0498**	**0.1958**	**0.0557**	**0.0458**	**0.1015**	**0.0000**	**99.4880**	**99.4880**	**0.0305**	**0.0000**	**100.2501**

3.3 Grading - 2017

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	1.7900e-003	1.5000e-003	0.0160	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	3.2486	3.2486	1.2000e-004	0.0000	3.2517
Total	**1.7900e-003**	**1.5000e-003**	**0.0160**	**4.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3200e-003**	**8.7000e-004**	**3.0000e-005**	**9.0000e-004**	**0.0000**	**3.2486**	**3.2486**	**1.2000e-004**	**0.0000**	**3.2517**

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					0.0569	0.0000	0.0569	0.0217	0.0000	0.0217	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0974	1.2048	0.5937	1.0700e-003		0.0498	0.0498		0.0458	0.0458	0.0000	99.4879	99.4879	0.0305	0.0000	100.2500
Total	**0.0974**	**1.2048**	**0.5937**	**1.0700e-003**	**0.0569**	**0.0498**	**0.1067**	**0.0217**	**0.0458**	**0.0675**	**0.0000**	**99.4879**	**99.4879**	**0.0305**	**0.0000**	**100.2500**

3.3 Grading - 2017

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	1.7900e-003	1.5000e-003	0.0160	4.0000e-005	3.2900e-003	3.0000e-005	3.3200e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	3.2486	3.2486	1.2000e-004	0.0000	3.2517
Total	**1.7900e-003**	**1.5000e-003**	**0.0160**	**4.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3200e-003**	**8.7000e-004**	**3.0000e-005**	**9.0000e-004**	**0.0000**	**3.2486**	**3.2486**	**1.2000e-004**	**0.0000**	**3.2517**

3.4 Building Construction - 2017

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	0.0415	0.3585	0.2429	3.6000e-004		0.0240	0.0240		0.0225	0.0225	0.0000	32.2513	32.2513	8.0800e-003	0.0000	32.4533
Total	**0.0415**	**0.3585**	**0.2429**	**3.6000e-004**		**0.0240**	**0.0240**		**0.0225**	**0.0225**	**0.0000**	**32.2513**	**32.2513**	**8.0800e-003**	**0.0000**	**32.4533**

3.4 Building Construction - 2017

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	4.4900e-003	0.1203	0.0323	2.4000e-004	5.7500e-003	1.0200e-003	6.7800e-003	1.6600e-003	9.8000e-004	2.6400e-003	0.0000	22.8645	22.8645	1.7100e-003	0.0000	22.9073
Worker	0.0139	0.0116	0.1237	2.8000e-004	0.0255	2.1000e-004	0.0257	6.7700e-003	2.0000e-004	6.9700e-003	0.0000	25.1768	25.1768	9.5000e-004	0.0000	25.2006
Total	**0.0184**	**0.1320**	**0.1560**	**5.2000e-004**	**0.0313**	**1.2300e-003**	**0.0325**	**8.4300e-003**	**1.1800e-003**	**9.6100e-003**	**0.0000**	**48.0413**	**48.0413**	**2.6600e-003**	**0.0000**	**48.1079**

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	0.0415	0.3585	0.2429	3.6000e-004		0.0240	0.0240		0.0225	0.0225	0.0000	32.2513	32.2513	8.0800e-003	0.0000	32.4532
Total	**0.0415**	**0.3585**	**0.2429**	**3.6000e-004**		**0.0240**	**0.0240**		**0.0225**	**0.0225**	**0.0000**	**32.2513**	**32.2513**	**8.0800e-003**	**0.0000**	**32.4532**

3.4 Building Construction - 2017

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	4.4900e-003	0.1203	0.0323	2.4000e-004	5.7500e-003	1.0200e-003	6.7800e-003	1.6600e-003	9.8000e-004	2.6400e-003	0.0000	22.8645	22.8645	1.7100e-003	0.0000	22.9073
Worker	0.0139	0.0116	0.1237	2.8000e-004	0.0255	2.1000e-004	0.0257	6.7700e-003	2.0000e-004	6.9700e-003	0.0000	25.1768	25.1768	9.5000e-004	0.0000	25.2006
Total	**0.0184**	**0.1320**	**0.1560**	**5.2000e-004**	**0.0313**	**1.2300e-003**	**0.0325**	**8.4300e-003**	**1.1800e-003**	**9.6100e-003**	**0.0000**	**48.0413**	**48.0413**	**2.6600e-003**	**0.0000**	**48.1079**

3.4 Building Construction - 2018

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	0.3064	2.7121	2.0180	3.1000e-003		0.1727	0.1727		0.1621	0.1621	0.0000	274.1159	274.1159	0.0684	0.0000	275.8256
Total	**0.3064**	**2.7121**	**2.0180**	**3.1000e-003**		**0.1727**	**0.1727**		**0.1621**	**0.1621**	**0.0000**	**274.1159**	**274.1159**	**0.0684**	**0.0000**	**275.8256**

3.4 Building Construction - 2018

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	0.0340	0.9702	0.2500	2.0300e-003	0.0495	6.9900e-003	0.0565	0.0143	6.6900e-003	0.0210	0.0000	196.0178	196.0178	0.0140	0.0000	196.3666
Worker	0.1063	0.0870	0.9332	2.3300e-003	0.2194	1.7800e-003	0.2212	0.0583	1.6400e-003	0.0599	0.0000	210.4480	210.4480	7.1800e-003	0.0000	210.6275
Total	**0.1403**	**1.0572**	**1.1832**	**4.3600e-003**	**0.2688**	**8.7700e-003**	**0.2776**	**0.0725**	**8.3300e-003**	**0.0809**	**0.0000**	**406.4658**	**406.4658**	**0.0211**	**0.0000**	**406.9941**

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	0.3064	2.7121	2.0180	3.1000e-003		0.1727	0.1727		0.1621	0.1621	0.0000	274.1156	274.1156	0.0684	0.0000	275.8253
Total	**0.3064**	**2.7121**	**2.0180**	**3.1000e-003**		**0.1727**	**0.1727**		**0.1621**	**0.1621**	**0.0000**	**274.1156**	**274.1156**	**0.0684**	**0.0000**	**275.8253**

3.4 Building Construction - 2018

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	0.0340	0.9702	0.2500	2.0300e-003	0.0495	6.9900e-003	0.0565	0.0143	6.6900e-003	0.0210	0.0000	196.0178	196.0178	0.0140	0.0000	196.3666
Worker	0.1063	0.0870	0.9332	2.3300e-003	0.2194	1.7800e-003	0.2212	0.0583	1.6400e-003	0.0599	0.0000	210.4480	210.4480	7.1800e-003	0.0000	210.6275
Total	**0.1403**	**1.0572**	**1.1832**	**4.3600e-003**	**0.2688**	**8.7700e-003**	**0.2776**	**0.0725**	**8.3300e-003**	**0.0809**	**0.0000**	**406.4658**	**406.4658**	**0.0211**	**0.0000**	**406.9941**

3.5 Paving - 2018

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	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	4.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.5 Paving - 2018

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	8.0000e-004	6.5000e-004	7.0000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5788	1.5788	5.0000e-005	0.0000	1.5801
Total	**8.0000e-004**	**6.5000e-004**	**7.0000e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5788**	**1.5788**	**5.0000e-005**	**0.0000**	**1.5801**

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	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	4.8300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0213**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.5 Paving - 2018

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	8.0000e-004	6.5000e-004	7.0000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5788	1.5788	5.0000e-005	0.0000	1.5801
Total	**8.0000e-004**	**6.5000e-004**	**7.0000e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.5788**	**1.5788**	**5.0000e-005**	**0.0000**	**1.5801**

3.6 Architectural Coating - 2018

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	0.6603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0267	0.0247	4.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.4043	3.4043	3.2000e-004	0.0000	3.4124
Total	**0.6643**	**0.0267**	**0.0247**	**4.0000e-005**		**2.0100e-003**	**2.0100e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.4043**	**3.4043**	**3.2000e-004**	**0.0000**	**3.4124**

3.6 Architectural Coating - 2018

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	1.9700e-003	1.6100e-003	0.0173	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.8943	3.8943	1.3000e-004	0.0000	3.8976
Total	**1.9700e-003**	**1.6100e-003**	**0.0173**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1100e-003**	**0.0000**	**3.8943**	**3.8943**	**1.3000e-004**	**0.0000**	**3.8976**

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	0.6603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9800e-003	0.0267	0.0247	4.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	3.4043	3.4043	3.2000e-004	0.0000	3.4124
Total	**0.6643**	**0.0267**	**0.0247**	**4.0000e-005**		**2.0100e-003**	**2.0100e-003**		**2.0100e-003**	**2.0100e-003**	**0.0000**	**3.4043**	**3.4043**	**3.2000e-004**	**0.0000**	**3.4124**

3.6 Architectural Coating - 2018

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	1.9700e-003	1.6100e-003	0.0173	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1100e-003	0.0000	3.8943	3.8943	1.3000e-004	0.0000	3.8976
Total	**1.9700e-003**	**1.6100e-003**	**0.0173**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1100e-003**	**0.0000**	**3.8943**	**3.8943**	**1.3000e-004**	**0.0000**	**3.8976**

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	0.1351	0.3400	3.9162	0.0135	1.4742	9.6300e-003	1.4838	0.3913	8.8900e-003	0.4002	0.0000	1,224.4906	1,224.4906	0.0298	0.0000	1,225.2362
Unmitigated	0.1351	0.3400	3.9162	0.0135	1.4742	9.6300e-003	1.4838	0.3913	8.8900e-003	0.4002	0.0000	1,224.4906	1,224.4906	0.0298	0.0000	1,225.2362

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	291.20	291.20	291.20	3,953,999	3,953,999
Total	291.20	291.20	291.20	3,953,999	3,953,999

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
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	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Parking Lot	0.544547	0.044708	0.198656	0.126890	0.018261	0.005879	0.019662	0.030939	0.001958	0.002113	0.004656	0.000702	0.001029

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	260.9892	260.9892	0.0108	2.2300e-003	261.9229
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	260.9892	260.9892	0.0108	2.2300e-003	261.9229
NaturalGas Mitigated	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
NaturalGas Unmitigated	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129

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					
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	574000	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
Total		**3.1000e-003**	**0.0281**	**0.0236**	**1.7000e-004**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**30.6308**	**30.6308**	**5.9000e-004**	**5.6000e-004**	**30.8129**

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					
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	574000	3.1000e-003	0.0281	0.0236	1.7000e-004		2.1400e-003	2.1400e-003		2.1400e-003	2.1400e-003	0.0000	30.6308	30.6308	5.9000e-004	5.6000e-004	30.8129
Total		**3.1000e-003**	**0.0281**	**0.0236**	**1.7000e-004**		**2.1400e-003**	**2.1400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**30.6308**	**30.6308**	**5.9000e-004**	**5.6000e-004**	**30.8129**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	144320	45.9834	1.9000e-003	3.9000e-004	46.1480
Unrefrigerated Warehouse-No Rail	674800	215.0057	8.8800e-003	1.8400e-003	215.7749
Total		**260.9892**	**0.0108**	**2.2300e-003**	**261.9229**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	144320	45.9834	1.9000e-003	3.9000e-004	46.1480
Unrefrigerated Warehouse-No Rail	674800	215.0057	8.8800e-003	1.8400e-003	215.7749
Total		**260.9892**	**0.0108**	**2.2300e-003**	**261.9229**

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	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Unmitigated	1.1553	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183

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	0.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Total	**1.1553**	**8.0000e-005**	**8.9300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0171**	**0.0171**	**5.0000e-005**	**0.0000**	**0.0183**

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	0.1321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0224					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.5000e-004	8.0000e-005	8.9300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0171	0.0171	5.0000e-005	0.0000	0.0183
Total	**1.1553**	**8.0000e-005**	**8.9300e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0171**	**0.0171**	**5.0000e-005**	**0.0000**	**0.0183**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	289.1750	2.1210	0.0521	357.7291
Unmitigated	289.1750	2.1210	0.0521	357.7291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	64.75 / 0	289.1750	2.1210	0.0521	357.7291
Total		**289.1750**	**2.1210**	**0.0521**	**357.7291**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	64.75 / 0	289.1750	2.1210	0.0521	357.7291
Total		**289.1750**	**2.1210**	**0.0521**	**357.7291**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	53.4272	3.1575	0.0000	132.3637
Unmitigated	53.4272	3.1575	0.0000	132.3637

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	263.2	53.4272	3.1575	0.0000	132.3637
Total		**53.4272**	**3.1575**	**0.0000**	**132.3637**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	263.2	53.4272	3.1575	0.0000	132.3637
Total		**53.4272**	**3.1575**	**0.0000**	**132.3637**

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