AIR QUALITY AND GREENHOUSE GAS ANALYSIS

FOR THE

FONTANA TEC EQUIPMENT TRUCK DEALERSHIP PROJECT

NOVEMBER 2015

Prepared for:

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Chapters Page Numbers

Appendices

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1.1 INTRODUCTION

This Air Quality and Greenhouse Gas Analysis identifies and analyzes the potential impacts from the Fontana TEC Truck Equipment Dealership Project (hereinafter "proposed project") related to air quality and greenhouse gas (GHG) emissions. The information and analysis in this document is prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) Guidelines and the South Coast Air Quality Management District (SCAQMD) requirements. The modeling efforts utilized the California Emission Estimator Model (CalEEMod)™ (v.2013.2.2). Modeling outputs are provided in the Appendix. This study is organized as follows:

- Chapter 1 Introduction
- Chapter 2 Air Quality Analysis
- Chapter 3 Greenhouse Gas Emissions Analysis
- Chapter 4 References

The Air Quality Analysis and Greenhouse Gas Emissions Analysis each include an environmental setting, regulatory setting, thresholds of significance, impacts, and mitigation.

1.2 PROJECT SUMMARY

The proposed project consists of the construction of a truck sales, service, retail parts sales, and warehouse commercial development, including a total of 105,000 square feet of building footprint, consisting of separate retail, office, and parts/service areas. The proposed project includes a total of 14 acres located at 14600 Randall Avenue in the City of Fontana, San Bernardino County. The proposed project General Plan Land Use designation is Light Industrial and the zoning is also Light Industrial (M-1).

The proposed project also includes a total of 408,364 square feet of impervious surface, including a large parking lot. There would also be a shipping/receiving area for the warehouse. Additionally, the proposed project is expected to employ a total of approximately 160 people. The operating hours are expected to be M-F 7AM-midnight, Saturday 8AM-4:30PM, and Sunday 8AM-4PM.

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This chapter describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from project implementation. This section is based in part on the following technical studies: SCAQMD CEQA Handbook (SCAQMD, 1993), Final 2012 Air Quality Management Plan (SCAQMD, 2013), *Air Quality and Land Use Handbook: A Community Health Perspective (California Air Resources Board 2007),* CalEEMod *(v.2013.2.2)* (California Air Resources Board 2007). (Note: The Greenhouse Gases and Climate Change analysis is located in a separate chapter.)

2.1 EXISTING SETTING

SOUTH COAST AIR BASIN

The City of Fontana is located within the South Coast Air Basin (SCAB). The SCAB is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity.

The SCAB has over 15 million people with one of the worst air quality conditions (e.g., high concentrations of ozone [O_3], carbon monoxide [CO], particulate matter less than or equal to 10 microns (PM_{10}), and PM less than or equal to 2.5 microns [$PM_{2.5}$]) in the nation because of the topographical features that trap anthropogenic air pollutants that are associated with the dense population. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry. Mobile source emissions are a major contributor to overall pollution within the SCAB.

The SCAB experiences a persistent temperature inversion (increasing temperature with increasing altitude) that limits the vertical dispersion of air contaminants, holding them relatively close to the ground until the inversion layer breaks through, allowing the vertical mixing of the layers. Strong, dry north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, helping to disperse air contaminants. These conditions, when coupled with the surrounding mountain ranges, hinder the regional dispersion of air pollutants. These meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone (O_3) and urban smog.

Climate

The region has a year-round Mediterranean climate or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Climate in the SCAB is determined by its terrain and geographical location. The SCAB is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the SCAB. The SCAB lies in the semi-permanent high-pressure zone of the eastern Pacific; the resulting climate is mild and tempered by cool ocean breezes.

The annual average temperature varies little throughout the SCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site with sufficient data to describe local climate is the Fontana Kaiser Station. The monthly average maximum temperature recorded at this station in the past ranged from 66.8°F in January to 95.0°F in July, with an annual average maximum of 79.4°F. The monthly average minimum temperature recorded at this station ranged from 44.0°F in January to 62.9°F in August, with an annual average minimum of 52.3°F. January is typically the coldest month, and July and August are typically the warmest months in this area of the SCAB. (Western Regional Climate Center, 2013.)

CRITERIA POLLUTANTS

The United States Environmental Protection Agency (EPA) uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). Each criteria pollutant is described below.

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both VOCs and NOx are emitted by transportation and industrial sources. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks.

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban atmospheres. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory

infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain, and may affect both terrestrial and aquatic ecosystems. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NOx). NOx plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NOx forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and VOCs are also considered particulate matter.

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

Fine particulate matter ($PM_{2.5}$) consists of fine particles, which are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular

disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials, and is a major cause of visibility impairment.

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

ODORS

Typically odors are regarded as a nuisance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals and schools. The proposed project is located approximately 240 yards west of existing residences, which include sensitive receptors.

AMBIENT AIR QUALITY

Both the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and California state ambient air quality standards are summarized in **Table 2-1** for important pollutants. The federal and state ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter between 2.5 and 10 microns in diameter (PM_{10}).

The U.S. Environmental Protection Agency established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The 1-hour ozone standard was phased out and replaced by an 8-hour standard of 0.075 PPM. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U.S. Supreme Court in a decision issued in February of 2001.

TABLE 2-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	*AVERAGING TIME*	*FEDERAL PRIMARY STANDARD*	*STATE STANDARD*
Ozone	1-Hour 8-Hour	-- 0.075 ppm	0.09 ppm 0.070 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.53 ppm 0.100 ppm	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm 75 ppb	-- 0.04 ppm 0.25 ppm
PM10	Annual 24-Hour	-- 150 ug/m3	20 ug/m3 50 ug/m3
PM2.5	Annual 24-Hour	15 ug/m3 35 ug/m3	12 ug/m3 --
Lead	30-Day Avg. 3-Month Avg.	-- 1.5 ug/m3	1.5 ug/m3 --

NOTES: PPM = PARTS PER MILLION, PPB = PARTS PER BILLION, UG/M3 = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2012 (WWW.ARB.CA.GOV/RESEARCH/AAQS/CAAQS/CAAQS/HTM) AND USEPA, 2012 (WWW.EPA.GOV/AIR/CRITERIA/HTML)

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The current PM_{10} standards were to be retained, but the method and form for determining compliance with the standards were revised.

The State of California regularly reviews scientific literature regarding the health effects and exposure to PM and other pollutants. On May 3, 2002, CARB staff recommended lowering the level of the annual standard for PM_{10} and establishing a new annual standard for $PM_{2.5}$. The new standards became effective on July 5, 2003, with another revision on November 29, 2005.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within the project area is related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone (O_3), carbon monoxide (CO), and nitrogen dioxide (NO_2) as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide (SO_2), areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

San Bernardino County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$, and is either Unclassified or Attainment for all other criteria pollutants. San Bernardino County has a national designation of Nonattainment for ozone, PM_{10}, and $PM_{2.5}$. The County is designated either attainment or unclassified for all other criteria pollutants. **Table 2-2** presents the state and nation attainment status for San Bernardino County.

TABLE 2-2: STATE AND NATIONAL ATTAINMENT STATUS (SAN BERNARDINO COUNTY)

CRITERIA POLLUTANTS	*STATE DESIGNATIONS*	*NATIONAL DESIGNATIONS*
Ozone	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment[1]	Nonattainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Unclassified	Unclassified
Sulfates	Attainment	
Lead	Attainment	
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

[1] *COUNTY PORTION OF FEDERAL OZONE AQMA.*

SOURCE: CALIFORNIA AIR RESOURCES BOARD (2015).

South Coast Air Basin Monitoring

The SCAB consists of portions or all of four counties, including all of Orange County and portions of Los Angeles, San Bernardino, and Riverside counties, covering a total of approximately 6,745 square miles. It is bounded on the west by the Pacific Ocean, the north by the San Gabriel Mountains, the east by the San Bernardino Mountains, and the south by the Santa Ana Mountains.

CARB maintains numerous air quality monitoring sites throughout each County in the Air Basin to measure ozone, $PM_{2.5}$, and PM_{10}. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. Data obtained from the monitoring sites throughout the SCAB between 2010 and 2012 is summarized in **Tables 2-3 through 2-5**.

TABLE 2-3 SCAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY - OZONE 2012-2014

Year	*Days > Standard*				*1-Hour Observations*			*8-Hour Averages*				*Year Coverage*	
	State		*National*			*State*	*Nat'l*	*State*		*National*			
	1-Hr	*8-Hr*	*1-Hr*	*'08 8-Hr*	*Max.*	*D.V.[1]*	*D.V.[2]*	*Max.*	*D.V.[1]*	*Max.*	*'08 D.V.[2]*	*Min*	*Max*
2014	74	129	*10*	92	0.141	0.14	*0.135*	0.111	0.112	0.110	0.102	20	100
2013	70	119	*5*	88	0.151	0.15	*0.143*	0.123	0.122	0.122	0.107	76	99
2012	97	140	*12*	111	0.147	0.15	*0.140*	0.112	0.122	0.112	0.106	35	100

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V. [1] = STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE.

SOURCES: CALIFORNIA AIR RESOURCES BOARD AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES, 2015.

TABLE 2-4: SCAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY - PM $_{2.5}$ 2012-2014

Year	Est. Days > Nat'l '06 Std.	Annual Average		Nat'l Ann. Std. D.V.[1]	State Annual D.V.[2]	Nat'l '06 Std. 98th Percentile	Nat'l '06 24-Hr Std. D.V.[1]	High 24-Hour Average		Year Coverage	
		Nat'l	State					Nat'l	State	Min.	Max.
2014	9.4	14.5	19.0	14.5	19	40.0	38	78.9	78.9	40	97
2013	9.2	14.1	19.0	14.8	19	37.5	36	60.3	170.8	47	99
2012	10.6	15.1	18.0	15.2	18	35.6	36	58.7	182.2	66	100

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. [1] = STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE

SOURCES: CALIFORNIA AIR RESOURCES BOARD AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES, 2015.

TABLE 2-5: SCAB AMBIENT AIR QUALITY MONITORING DATA SUMMARY - PM $_{10}$ 2012-2014

Year	Est. Days > Std.		Annual Average		3-Year Average		High 24-Hr Average		Year Coverage
	Nat'l	State	Nat'l	State	Nat'l	State	Nat'l	State	
2014	1.0	128.5	*57.6*	44.8	*56*	45	157.2	131.0	100
2013	2.0	90.2	*55.6*	40.0	*53*	40	286.0	199.2	100
2012	0.0	98.2	*53.3*	38.8	*52*	41	104.8	90.9	100

NOTES: THE NATIONAL ANNUAL AVERAGE PM_{10} STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA.

SOURCES: CALIFORNIA AIR RESOURCES BOARD AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM (ADAM) AIR POLLUTION SUMMARIES, 2015.

2.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

The law recognizes the importance for each state to locally carry out the requirements of the FCAA, as special consideration of local industries, geography, housing patterns, etc. are needed to have full comprehension of the local pollution control problems. As a result, the EPA requires each state to develop a State Implementation Plan (SIP) that explains how each state will implement the FCAA within their jurisdiction. A SIP is a collection of rules and regulations that a particular state will implement to control air quality within their jurisdiction. CARB is the state agency that is responsible for preparing and implementing the California SIP.

Transportation Conformity

Transportation conformity requirements were added to the FCAA in the 1990 amendments, and the EPA adopted implementing regulations in 1997. See §176 of the FCAA (42 U.S.C. §7506) and 40 CFR Part 93, Subpart A. Transportation conformity serves much the same purpose as general conformity: it ensures that transportation plans, transportation improvement programs, and projects that are developed, funded, or approved by the United States Department of Transportation or that are recipients of funds under the Federal Transit Act or from the Federal Highway Administration (FHWA), conform to the SIP as approved or promulgated by EPA.

Currently, transportation conformity applies in nonattainment areas and maintenance areas. Under transportation conformity, a determination of conformity with the applicable SIP must be made by the agency responsible for the project, such as the Metropolitan Planning Organization, the Council of Governments, or a federal agency. The agency making the determination is also responsible for all the requirements relating to public participation. Generally, a project will be considered in conformance if it is in the transportation improvement plan and the transportation improvement plan is incorporated in the SIP. If an action is covered under transportation conformity, it does not need to be separately evaluated under general conformity.

Transportation Control Measures

One particular aspect of the SIP development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

STATE

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB's motor vehicle standards specify the allowable grams of pollution per mile

driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations which required auto manufacturers to phase in less polluting vehicles.

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the California Health and Safety Code (CH&SC) [§39606(b)], which are similar to the federal standards.

Air Quality Standards

NAAQS are determined by the EPA. The standards include both primary and secondary ambient air quality standards. Primary standards are established with a safety margin. Secondary standards are more stringent than primary standards and are intended to protect public health and welfare. States have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards.

Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM_{10}) and lead. In addition, California has created standards for pollutants that are not covered by federal standards. The state and federal primary standards for major pollutants are shown in **Table 2-1**.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent

emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide.

LOCAL

South Coast Air Quality Management District (SCAQMD)

At the county level, air quality is managed through land use and development planning practices that are implemented by the local jurisdictions and through permitted source controls that are implemented by the SCAQMD. The 1976 Lewis Air Quality Management Act established SCAQMD and other air districts throughout the state. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state.

ARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. Significant authority for air quality control within them has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

REGIONAL AIR QUALITY MANAGEMENT PLAN

SCAQMD and SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SCAB. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The AQMP proposes policies and measures to achieve federal and state standards for healthful air quality in the SCAB and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction (namely, Coachella Valley). The AQMP also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools.

The Final 2012 AQMP is available from SCAQMD, and it describes the control strategies necessary to achieve federal clean air standards by specified deadlines. The final plan was adopted by SCAQMD's Governing Board in December 2012. The early development process for the 2016 AQMP is currently underway.

SCAQMD RULES AND REGULATIONS

All projects are subject to SCAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction anticipated for the proposed project include the following:

Rule 401 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

Rule 402 – Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Rule 403 – Fugitive Dust. This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust.

Rule 1113 – Architectural Coatings. No person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in a table incorporated in the Rule.

Rule 1301 – General. This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the NAAQS, while future economic growth within SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia and Ozone Depleting Compounds (ODCs) from new, modified, or relocated facilities by requiring the use of Best Available Control Technology (BACT).

City of Fontana General Plan

The City of Fontana General Plan establishes the following goals and policies relative to air quality and greenhouse gas emissions in the General Plan:

AIR QUALITY ELEMENT GOALS AND POLICIES

Goal 1: **Air quality improvements are achieved in our City while continued economic growth has been sustained.**

> **Policy 1**: Support the Air Quality Management District in implementing cost effective measures that enhance surrounding jurisdictions ability to meet or exceed adopted air quality standards.
>
> **Policy 2**: Preferential treatment or permit streamlining shall be provided for those industrial/commercial projects that go beyond BACT or emissions reduction measures that go beyond those required by the SCAQMD for permitting.

Policy 3: Preferential treatment or permit streamlining shall be provided for those residential projects that incorporate emissions reduction measures that go beyond those suggested by the SCAQMD for residential development.

Policy 4: Educate the public on the economic benefits of reduced air pollution.

Goal 2: **Air quality improvements are achieved in our City while continued economic growth has been sustained.**

Policy 1: The City shall seek to integrate land use and transportation planning to the maximum extent practical.

Policy 2: Mixed-use development should be planned for and incentivized to develop in our City.

Policy 3: Employers locating in our City should be encouraged to develop trip reduction plans to promote alternative work schedules, ridesharing, telecommuting, and work-at-home programs, employee education and preferential parking.

Policy 4: Incentives, regulations, and Transportation Demand Management systems shall be developed in cooperation with surrounding jurisdictions to eliminate vehicle trips that would otherwise be made.

Policy 5: Merchants in our City should be assisted in getting their customers to shift from single occupancy vehicles to transit, carpools, bicycles, or foot.

Policy 6: Developers in our community shall work to reduce vehicle trips and total vehicle miles traveled in projects that are approved here.

Policy 7: The City should manage parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

Policy 8: Efforts to expand bus, rail, and other forms of transit in the portion of the South Coast Air Basin within San Bernardino County shall be cooperatively pursued with Omnitrans, MTA and other transit providers.

Policy 9: The City should invest in clean fuel systems on new local government fleet vehicles as their service life ends, and promote similar actions by other units of government.

Policy 10: The City shall manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, as a way to achieve enhanced mobility.

Policy 11: Traffic signals should be synchronized throughout the City and with those of adjoining cities and the California Department of Transportation.

Policy 12: Traffic signals shall be constructed and improved with channelization and Automated Traffic Surveillance and Control systems at appropriate intersections.

Policy 13: Traffic hazards, delays, and idle time should be diminished through highway and roadway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings.

Policy 14: Heavy trucks shall be discouraged from excessive idling both at the roadside and during unloading/loading operations.

Policy 15: The City should provide incentives for business owners to schedule deliveries at off-peak traffic periods.

Goal 3: A concerted effort to reduce energy consumption in our City results in reduced emissions.

Policy 1: Source reduction, recycling, and other appropriate measures to reduce the dependence on and processing of new raw materials shall be promoted.

Policy 2: Energy conservation shall be achieved through a combination of incentives and regulations for private and public developments.

Policy 3: The City shall promote and provide incentives for the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy 4: The City shall promote and provide incentives for the use of energy efficient building materials/methods that reduce emissions.

Policy 5: The City shall promote and provide incentives for the use of efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.

Policy 6: Centrally heated facilities to utilize automated time clocks or occupant sensors to control heating shall be required in facilities of a size and character to yield a positive return on investment.

Policy 7: The City shall require residential building construction to comply with energy use guidelines detailed in Title 24 of the California Administrative Code and shall promote and provide incentives for residential building construction that goes beyond the guidelines detailed in Title 24.

Policy 8: Stationary pollution sources shall be managed to prevent the release of toxic pollutants through:

- Design features
- Operating procedures
- Preventive maintenance

- Operator training and
- Emergency response planning.

Policy 9: Stationary air pollution sources shall comply with applicable air district rules and control measures.

Policy 10: Any project that exceeds allowable emissions, as established by the SCAQMD, shall mitigate its anticipated emissions to the extent reasonably feasible.

Policy 11: Alternative energy sources development shall be promoted in Fontana.

Goal 4: The minimum practicable particulate emissions are released in our City from construction and operation of roads and buildings.

Policy 1: Particulate emissions from roads, parking lots, construction sites and agricultural lands shall be kept at the minimum feasible level.

Policy 2: Emissions from building materials and construction methods that generate excessive pollutants shall be kept at the minimum feasible level.

OPEN SPACE & CONSERVATION ELEMENT GOALS AND POLICIES

Goal 2.2: Expand the open space and conservation system, where feasible, to include private and public lands that off multi-use open space and cultural resource opportunities.

Policy: Evaluate opportunities for mixed-uses of private and public open space and utility rights-of-way and incorporate such mixed uses into the approved plan as part of the new development and public infrastructure planning process.

2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Cause a violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people.

IMPACTS AND MITIGATION MEASURES

Impact 2-1: Project operations have the potential to cause a violation of any air quality standard or contribute substantially to an existing or projected air quality violation (Less than Significant)

The proposed project would be a direct and indirect source of air pollution, in that it would generate and attract vehicle trips in the region (mobile source emissions) and it would increase area source emissions and energy consumption. The mobile source emissions would be entirely from vehicles, while the area source emissions would be primarily from the use of landscape fuel combustion, consumer products, and architectural coatings. **Table 2-6** provides the project-level operational SCAQMD CEQA thresholds of significance for ROG, NOX, and PM_{10}. There is no threshold established for $PM_{2.5}$.

TABLE 2-6: PROJECT-LEVEL OPERATIONAL EMISSION THRESHOLDS

	VOC	NOx	PM_{10}	$PM_{2.5}$
Threshold	55 lbs/day	55 lbs/day	150 lbs/day	55 lbs/day

SOURCES: SCAQMD CEQA HANDBOOK (SCAQMD, 1993)

The California Emission Estimator Model (CalEEMod)^{TM} (v.2013.2.2) was used to estimate project-level operational emissions for the proposed project. **Table 2-7** shows the emissions, which include mobile source, area source, and energy emissions of criteria pollutants that would result from operations of the proposed project.

TABLE 2-7: OPERATIONAL EMISSIONS (UNMITIGATED MAXIMUM DAILY LBS/DAY)

	VOC	NOx	PM10 Total	PM2.5 Total
Summer				
Area	11.0712	5.1000e-4	1.9000e-004	1.9000e-004
Energy	0.0969	0.8811	0.0670	0.0670
Mobile	2.1235	4.3650	2.3233	0.6562
Total	**13.2916**	**5.2466**	**2.3904**	**0.7234**
Winter				
Area	11.0712	5.1000e-4	1.9000e-004	1.9000e-004
Energy	0.0969	0.8811	0.670	0.0670
Mobile	2.0642	4.5328	2.3237	0.6566
Total	**13.2323**	**5.4143**	**2.3909**	**0.7238**

SOURCES: CALEEMOD (V.2013.2.2)

As shown in the table above, operational ROG, NO_x, and PM_{10} emissions are below the thresholds of significance for the individual emission categories (i.e. area, energy, and mobile sources), as well as the total for these categories. In addition, the proposed project would be required to meet or exceed the most recent Title 24 Standard and the Green Building Code Standards (CalGreen), per City of Fontana requirements, which would reduce the total area source and energy emissions

during operational conditions. The proposed project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURES

None Required

Impact 2-2: Project construction has the potential to cause a violation of an air quality standard or contribute substantially to an existing or projected air quality violation (Less than Significant with Mitigation)

Construction activities would result in temporary short-term emissions associated with vehicle trips from construction workers, operation of construction equipment, and the dust generated during construction activities. These temporary and short-term emissions would generate additional ozone precursors (ROG and NOx) as well as PM_{10} and $PM_{2.5}$. **Table 2-8** provides the SCAQMD's CEQA Air Quality Significance Thresholds for ROG, NOX, PM_{10}, and $PM_{2.5}$.

TABLE 2-8: CONSTRUCTION EMISSION THRESHOLDS

Year	ROG	NOx	PM10	PM2.5
Threshold	75 lbs/day	100 lbs/day	150 lbs/day	55 lbs/day

SOURCES: SOURECE: SCAQMD CEQA HANDBOOK (SCAQMD, 1993)

The California Emission Estimator Model (CalEEMod)^{TM} (v.2013.2.2) was used to estimate construction emissions for the proposed project. **Table 2-9** shows the construction emissions for the construction years 2016 and 2017.

TABLE 2-9: CONSTRUCTION EMISSIONS (UNMITIGATED MAXIMUM DAILY LBS/DAY)

	ROG	NOx	PM10 Total	PM2.5 Total
2016 (Summer)	6.5655	74.9183	21.2076	12.6890
2016 (Winter)	6.5603	74.9255	21.2076	12.6890
2017 (Summer)	86.1789	34.1262	25.9628	15.2441
2017 (Winter)	86.1689	34.3693	4.7562	2.5561

SOURCE: CALEEMOD (V.2013.2.2)

As shown in the table above, the construction emissions over the course of the proposed project construction would not exceed the SCAQMD thresholds of significance, except for ROG emissions in summer and winter 2017. These emissions are expected to be above the 75 lbs/day threshold established by SCAQMD (Daily Construction Emissions (lbs/day)), and are due to the application of interior and exterior architectural coatings during the construction phase of the proposed project[1].

[1] ROG emissions from architectural coatings for the proposed project are calculated in CalEEMOD using a (CalEEMod default) non-residential ROG emission factor of 250 g/L for architectural coatings.

ARCHITECTURAL COATINGS

Architectural coatings contain VOCs that are similar to ROGs and are part of the O_3 precursors. Compliance with SCAQMD Rule 1113 (listed under *Regulatory Requirements* above) on the use of architectural coatings would minimize ROG emissions. SCAQMD Rule 1113 would require the use of low-VOC coatings during construction activities. Incorporation of **Mitigation Measure 2-1** (see below) would ensure that the proposed project would be compliant with SCAQMD Rule 1113 and construction ROG emissions would remain less than the 75 lbs/day threshold established by SCAQMD (Daily Construction Emissions (lbs/day)).

FUGITIVE DUST

Fugitive dust emissions are generally associated with (1) land clearing and exposure of soils to the air and wind, and (2) cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on daily levels of activity, the specific operations, and weather conditions at the time of construction. It was assumed for the air quality construction analysis (Appendix F) that soil would be balanced on site to minimize the need for import or export of soil during project construction[2].

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed project would be required to comply with SCAQMD Rules 402 and 403 (listed under *Regulatory Requirements* above) to control fugitive dust. Specifically, Rule 403 requires that fugitive dust be controlled with BACT so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Applicable dust suppression requirements from Rule 403 are summarized below.

- Nontoxic chemical soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Active sites shall be watered at least twice daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered, or at least 0.6 meter (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) maintained in accordance with the requirements of CVC Section 23114.
- Construction access roads shall be paved at least 30 meters (100 feet) onto the site from the main road.
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.

Implementation of these dust suppression techniques reduces fugitive dust generation (and thus PM_{10}). Compliance with AQMD rules would reduce impacts on nearby sensitive receptors. As a result, impacts related to fugitive dust would be less than significant.

CONCLUSION

With incorporation of **Mitigation Measure 2-1**, all construction emissions are below the project-level thresholds of significance and the proposed project would have a ***less than significant*** impact.

MITIGATION MEASURES

Mitigation Measure 2-1*: Prior to issuance of building permits, construction drawings shall indicate the types of architectural coatings proposed to be used in interior and exterior applications on the proposed buildings and verification that daily application will conform to the performance standard that emissions of volatile organic compounds from application of interior or exterior coatings will not exceed the daily emissions thresholds established by the South Coast Air Quality Management District. The performance standard may be met through use of low-volatile organic compound coatings (e.g. equivalent to 150 g/L of VOC), scheduling, or other means that may be identified on the construction drawings. Construction drawing shall specify use of High-Volume, Low Pressure (HVLP) spray guns for application of coatings. This mitigation measure shall be incorporated to the satisfaction of and with oversight by the City of Fontana and the SCAQMD.*

Impact 2-3: Project operations have the potential to cumulatively contribute to a violation of an air quality standard. (Less than Significant with Mitigation)

As described previously, the proposed project is in a non-attainment area for both ozone and particulate matter ($PM_{2.5}$ and PM_{10}). Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the SCAB. The greatest cumulative impact on the quality of the regional air basin will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact.

The SCAQMD has developed regional and localized significance thresholds for other regulated pollutants, as summarized on **Tables 2-6** and **2-8**. The SCAQMD's CEQA Air Quality Significance Thresholds indicate that any projects in the Basin with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

The unmitigated proposed project would not result in any exceedances of localized significance thresholds for regulated pollutants, except for ROG. However, with the incorporation of **Mitigation Measure 2-1**, this threshold would not be exceeded. The project's cumulative emissions would not exceed the SCAQMD thresholds. Therefore, implementation of **Mitigation Measure 2-1** would reduce the level of significance to a ***less than significant*** impact.

MITIGATION MEASURES

Implement Mitigation Measure 2-1.

Impact 2-4: Carbon monoxide hotspot impacts (less than significant)

Project traffic would increase concentrations of carbon monoxide along streets providing access to the project site. Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources). The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations (i.e. hotspots), therefore, are usually only found near areas of high traffic volume and congestion.

San Bernardino County is listed with a statewide designation of attainment and a national designation of attainment/unclassified for carbon monoxide. The project is not located adjacent to a high volume roadway. However, according to CO Protocol (Caltrans 1997), intersections with Level of Service (LOS) E or F require detailed analysis. In addition, intersections that operate under LOS D conditions in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis. The SCAQMD recommends that a local CO hotspot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection is at LOS D or worse and where the project increases volume to capacity ratio by 2 percent, or 2) the project decreases LOS at an intersection from C to D.

The project specific traffic analysis examined Level of Service (LOS) for road segments and intersections affected by the proposed project. No existing or future street segments or intersections are forecast to operate at an unacceptable LOS E or worse with the recommended mitigation. Since the project is in an area with low background concentrations of carbon monoxide, changes in carbon monoxide levels resulting from the proposed project would not result in violations of the ambient air quality standards, and would represent a ***less than significant*** impact.

Impact 2-5: Potential for public exposure to toxic air contaminants (less than significant)

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (2007) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest

air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 2-10 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

TABLE 2-10: CARB MINIMUM SEPARATION RECOMMENDATIONS ON SITING SENSITIVE LAND USES

Source Category	*Advisory Recommendations*
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.[1]
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro- ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

The proposed project is a truck/part sales and vehicle service center. There would be some diesel particulate associated with the trucks; however, there would be limited emissions because run and idle times would be limited. The proposed project does not include any of the source categories listed in **Table 2-10**. Additionally, the proposed project is not expected to generate any additional sensitive receptors, as the proposed project does not include housing or other services for sensitive receptors. The nearest sensitive receptors are residences located approximately 240 yards to the east of proposed project site. The nearest school to the project site is approximately 0.3 miles to the southeast (Live Oak Elementary School).

The proposed project is consistent with the *CARB Minimum Separation Recommendations on Siting Sensitive Land Uses*. The proposed project would not substantially increase TACs beyond those that were previously planned for the City of Fontana General Plan. Therefore, implementation of the proposed project would not result in a significant increase in exposure of

sensitive receptors to localized concentrations of TACs. This proposed project would have a ***less than significant*** impact relative to this topic.

Impact 2-6: Potential for exposure to odors (less than significant)

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SCAQMD. The general nuisance rule (California Heath and Safety Code §41700 and SCAQMD Rule 402) is the basis for the threshold.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant.

If a project would locate receptors and known odor sources in proximity to each other further analysis may be warranted; however, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The proposed project would emit odors from construction and operational (vehicle repair and maintenance) activities. However, they are not anticipated to be offensive and are not likely to affect a substantial number of people. Construction activity would be short-term and would cease to occur after construction is completed.

Furthermore, the project would be implemented in compliance with SCAQMD Rule 402, which states that "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." Therefore, objectionable odors posing a health risk to potential on site and existing off site uses would not occur as a result of the proposed project.

Therefore, odor impacts would be less than significant and no mitigation measures are recommended. This impact is considered ***less than significant***.

This chapter discusses regional greenhouse gas (GHG) emissions and climate change impacts that could result from implementation of the proposed project. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG and climate change impacts in this chapter focuses on the proposed project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed project.

3.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC 2013)[1].

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission 2014) [2]. In California, the transportation sector

[1] Intergovernmental Panel on Climate Change. 2013. "Climate Change 2013: The Physical Science Basis, Summary for Policymakers." http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf

[2] California Energy Commission. 2014. California Greenhouse Gas Emission Inventory. http://www.arb.ca.gov/cc/inventory/inventory_current.htm

is the largest emitter of GHGs, followed by electricity generation (California Energy Commission 2014).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 459 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2012 (California Energy Commission 2014). By 2020, California is projected to produce 509 $MMTCO_2e$ per year.[3]

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7% of total GHG emissions in the state (California Energy Commission 2006a). This category was followed by the electric power sector (including both in-state and out of-state sources) (22.2%) and the industrial sector (20.5%) (California Energy Commission 2014).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 70% to 90% by the end of the 21st century (Cal EPA 2006)[4]. This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the

[3] California Air Resources Board. 2015. "2020 Business-as-Usual (BAU) Emissions Projection *2014 Edition*". http://www.arb.ca.gov/cc/inventory/data/bau.htm

[4] California Environmental Protection Agency, Climate Action Team. 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. http://www.climatechange.ca.gov/climate_action_team/reports/

form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (Cal EPA 2006). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands (Cal EPA 2006). As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (Cal EPA 2006), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

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

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will 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 capture and transport water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would 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 state fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the

state (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will 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 snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

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 are likely to 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, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large of wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, 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. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

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

ENERGY CONSUMPTION

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that ultimately result in global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Approximately 71 percent of the electrical power needed to meet California's demand is produced in the state. Approximately 29 percent of its electricity demand is imported from the Pacific Northwest and the Southwest (California Energy Commission, 2012)[5]. In 2010, California's in-state generated electricity was derived from natural gas (53.4 percent), large hydroelectric resources (14.6 percent), coal (1.7 percent), nuclear sources (15.7 percent), and renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (14.6 percent) (California Energy Commission, 2012).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (California

5 California Energy Commission (2012). Energy Almanac. Retrieved August 2012, from http://energyalmanac.ca.gov/overview/index.html

Energy Commission Energy Almanac, 2012). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2009, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (The World Factbook 2009, Washington, DC: Central Intelligence Agency, 2009). The transportation sector relies heavily on oil. In California, petroleum based fuels currently provide approximately 96 percent of the state's transportation energy needs (California Energy Commission, 2012).

Natural Gas/Propane

The state produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (California Energy Commission, 2012).

CITY OF FONTANA GHG EMISSIONS

GHG emissions were quantified in the City of Fontana Climate Action Plan. A reduction of 321,534 MTCO2e by year 2020 would be accomplished by state and county measures, through the implementation of AB 32, SB 375, AB 1493, the Renewable Portfolio Standard, and updates to the Title 24 Standards. An additional reduction of 66,464 $MTC0_2e$ is expected to be accomplished by the City itself, through local reduction measures, as described in further detail within the Plan.

The GHG emissions baseline inventory for 2008 and forecasts for 2020 under a business as usual approach and with the emissions reductions as described in the Climate Action Plan are shown in **Tables 3-1**. This table includes total emissions and per capita emissions by sector.

TABLE 3-1: GHG EMISSIONS INVENTORY/FORECASTS FOR 2008 AND 2020 (MT CO_2E)

Sector	*2008 Baseline*	*2020 Business-as-usual (BAU)*	*2020 Emissions with Reductions*	*% Change (between the 2020 BAU and 2020 Emissions with Reductions conditions)*
Energy	483,683	556,973	404,274	-27.4%
Transportation	708,716	774,078	575,706	-36.6%
Waste	19,570	24,052	7,737	-67.8%
Agriculture	3,850	1,962	1,962	0.0%
Wastewater Treatment	7,842	9,064	8,072	-10.9%
Water Conveyance	15,265	20,138	14,095	-30.0%
Total	**1,238,926**	**1,386,267**	**998,269**	**-28.0%**

SOURCE: CITY OF FONTANA CLIMATE ACTION PLAN DRAFT (2015).

Including all sectors, the community emitted approximately 1,238,926 $MTCO_2e$ in 2008 and was forecast to emit 1,386,267 MT CO_2e in the 2020 Business-as-usual scenario and 998,269 MT CO_2e in 2020 under the Reduction Plan established in the approach. This represents a total increase of 11.9 percent from the 2008 Baseline to the 2020 BAU conditions, and a reduction of 28.0 percent between the 2020 BAU condition and the 2020 Emissions with Reductions condition.

As shown in **Table 3-1**, the transportation sector is the single largest source of projected GHG emissions in the city. The City of Fontana is committed to reducing GHG emissions as development occurs by addressing GHG emissions on a project-by-project basis through the CEQA review process.

3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor National Ambient Air Quality Standards (NAAQS) vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on

city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Intermodal Surface Transportation Efficiency Act (ISTEA)

ISTEA (49 U.S.C. § 101 et seq.) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations (MPOs), such as SACOG, were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process was then to address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a criterion, along with cost and other values that determine the best transportation solution.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

SAFETEA-LU (23 U.S.C. § 507), renewed the Transportation Equity Act for the 21st Century (TEA-21) of 1998 (23 U.S.C.; 49 U.S.C.) through FY 2009. SAFETEA-LU authorized the federal surface transportation programs for highways, highway safety, and transit. SAFETEA-LU addressed the many challenges facing our transportation system today—such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment—as well as laying the groundwork for addressing future challenges. SAFETEA-LU promoted more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility to solve transportation problems in their

communities. SAFETEA-LU was extended in March of 2010 for nine months, and expired in December of the same year. In June 2012, SAFETEA-LU was replaced by the Moving Ahead for Progress in the 21st Century Act (MAP-21), which will take effect October 1, 2012.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the greenhouse gas (GHG) intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publically available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85% of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

STATE

Assembly Bill 1493

In response to AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. 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. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

CARB requested a waiver of federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

Assembly Bill 1007

Assembly Bill 1007, (Pavley, Chapter 371, Statutes of 2005) directed the CEC to prepare a plan to increase the use of alternative fuels in California. As a result, the CEC prepared the State Alternative Fuels Plan in consultation with the state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Assembly Bill 32- Climate Change Scoping Plan

On December 11, 2008 ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO_2e emissions by 169 million metric tons (MMT), or

approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO_2e under a business-as-usual scenario. (This is a reduction of 42 MMT CO_2e, or almost 10 percent, from 2002–2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e),
- the Low-Carbon Fuel Standard (15.0 MMT CO_2e),
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e), and
- a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

California Strategy to Reduce Petroleum Dependence (AB 2076)

In response to the requirements of AB 2076 (Chapter 936, Statutes of 2000), the CEC and the CARB developed a strategy to reduce petroleum dependence in California. The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Climate Action Program at Caltrans

The California Department of Transportation, Business, Transportation, and Housing Agency, prepared a Climate Action Program in response to new regulatory directives. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO_2 from transportation is twofold: (1) reduce congestion and improve efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty),

and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by CARB pursuant to AB 32.

Senate Bill 97 (SB 97)

Senate Bill 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The Amendments became effective on March 18, 2010.

Senate Bill 375

Sen. Bill No. 375 (Stats. 2008, ch. 728) (SB 375) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. The SCS is one component of the Regional Transportation Plan (RTP).

The SCS outlines the region's plan for combining transportation resources, such as roads and mass transit, with a realistic land use pattern, in order to meet a state target for reducing GHG emissions. The strategy must take into account the region's housing needs, transportation demands, and protection of resource and farmlands.

Additionally, SB 375 modified the state's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans.

Finally, SB 375 amended the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to ease the environmental review of developments that help reduce the growth of GHG emissions.

LOCAL

City of Fontana General Plan

The City of Fontana General Plan establishes the following goals and policies relative to air quality and greenhouse gas emissions in the General Plan:

AIR QUALITY ELEMENT GOALS AND POLICIES

Goal 1: **Air quality improvements are achieved in our City while continued economic growth has been sustained.**

Policy 1: Support the Air Quality Management District in implementing cost effective measures that enhance surrounding jurisdictions ability to meet or exceed adopted air quality standards.

Policy 2: Preferential treatment or permit streamlining shall be provided for those industrial/commercial projects that go beyond BACT or emissions reduction measures that go beyond those required by the SCAQMD for permitting.

Policy 3: Preferential treatment or permit streamlining shall be provided for those residential projects that incorporate emissions reduction measures that go beyond those suggested by the SCAQMD for residential development.

Policy 4: Educate the public on the economic benefits of reduced air pollution.

Goal 2: **Air quality improvements are achieved in our City while continued economic growth has been sustained.**

Policy 1: The City shall seek to integrate land use and transportation planning to the maximum extent practical.

Policy 2: Mixed-use development should be planned for and incentivized to develop in our City.

Policy 3: Employers locating in our City should be encouraged to develop trip reduction plans to promote alternative work schedules, ridesharing, telecommuting, and work-at-home programs, employee education and preferential parking.

Policy 4: Incentives, regulations, and Transportation Demand Management systems shall be developed in cooperation with surrounding jurisdictions to eliminate vehicle trips that would otherwise be made.

Policy 5: Merchants in our City should be assisted in getting their customers to shift from single occupancy vehicles to transit, carpools, bicycles, or foot.

Policy 6: Developers in our community shall work to reduce vehicle trips and total vehicle miles traveled in projects that are approved here.

Policy 7: The City should manage parking supply to discourage auto use, while ensuring that economic development goals will not be sacrificed.

Policy 8: Efforts to expand bus, rail, and other forms of transit in the portion of the South Coast Air Basin within San Bernardino County shall be cooperatively pursued with Omnitrans, MTA and other transit providers.

Policy 9: The City should invest in clean fuel systems on new local government fleet vehicles as their service life ends, and promote similar actions by other units of government.

Policy 10: The City shall manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, as a way to achieve enhanced mobility.

Policy 11: Traffic signals should be synchronized throughout the City and with those of adjoining cities and the California Department of Transportation.

Policy 12: Traffic signals shall be constructed and improved with channelization and Automated Traffic Surveillance and Control systems at appropriate intersections.

Policy 13: Traffic hazards, delays, and idle time should be diminished through highway and roadway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings.

Policy 14: Heavy trucks shall be discouraged from excessive idling both at the roadside and during unloading/loading operations.

Policy 15: The City should provide incentives for business owners to schedule deliveries at off-peak traffic periods.

Goal 3: A concerted effort to reduce energy consumption in our City results in reduced emissions.

Policy 1: Source reduction, recycling, and other appropriate measures to reduce the dependence on and processing of new raw materials shall be promoted.

Policy 2: Energy conservation shall be achieved through a combination of incentives and regulations for private and public developments.

Policy 3: The City shall promote and provide incentives for the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy 4: The City shall promote and provide incentives for the use of energy efficient building materials/methods that reduce emissions.

Policy 5: The City shall promote and provide incentives for the use of efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units.

Policy 6: Centrally heated facilities to utilize automated time clocks or occupant sensors to control heating shall be required in facilities of a size and character to yield a positive return on investment.

Policy 7: The City shall require residential building construction to comply with energy use guidelines detailed in Title 24 of the California Administrative Code and shall promote and provide incentives for residential building construction that goes beyond the guidelines detailed in Title 24.

Policy 8: Stationary pollution sources shall be managed to prevent the release of toxic pollutants through:

- Design features
- Operating procedures
- Preventive maintenance
- Operator training and
- Emergency response planning.

Policy 9: Stationary air pollution sources shall comply with applicable air district rules and control measures.

Policy 10: Any project that exceeds allowable emissions, as established by the SCAQMD, shall mitigate its anticipated emissions to the extent reasonably feasible.

Policy 11: Alternative energy sources development shall be promoted in Fontana.

Goal 4: The minimum practicable particulate emissions are released in our City from construction and operation of roads and buildings.

Policy 1: Particulate emissions from roads, parking lots, construction sites and agricultural lands shall be kept at the minimum feasible level.

Policy 2: Emissions from building materials and construction methods that generate excessive pollutants shall be kept at the minimum feasible level.

OPEN SPACE & CONSERVATION ELEMENT GOALS AND POLICIES

Goal 2.2: Expand the open space and conservation system, where feasible, to include private and public lands that off multi-use open space and cultural resource opportunities.

Policy: Evaluate opportunities for mixed-uses of private and public open space and utility rights-of-way and incorporate such mixed uses into the approved plan as part of the new development and public infrastructure planning process.

San Bernardino Associated Governments (SANBAG) GHG Reduction Plan

San Bernardino Associated Governments (SANBAG) partnered with 21 cities in San Bernardino County to create a regional GHG Reduction Plan that could be adopted by the partnering cities. This effort was SANBAG's response to California Legislation AB 32, calling for a reduction in GHG's to 1990 levels by 2020, and SB 375 requiring regional transportation planning to promote reductions in passenger and light duty vehicle GHG emissions. The Reduction Plan contains a comprehensive GHG emissions inventory and an evaluation of reduction measures and related

general plan policies for each city. This Regional Reduction Plan aims to be the predecessor to a local climate action plan for each city. By collaborating on these goals, the partnership aims to more effectively address emissions that are influenced by the entire region. The 21 Partnership cities in this reduction plan are Adelanto, Big Bear Lake, Chino, Chino Hills, Colton, Fontana, Grand Terrace, Hesperia, Highland, Loma Linda, Montclair, Needles, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Twentynine Palms, Victorville, Yucaipa, and Yucca Valley.

Draft City of Fontana Climate Action Plan (CAP)

The Draft City of Fontana Climate Action Plan was developed in August 2015 and establishes a baseline 2008 GHG emissions inventory for the City, a 2020 reduction target, a 2020 business-as-usual forecast, and provides GHG reduction measures and implementation/monitoring guidelines. The Plan describes that the City of Fontana has selected a GHG reduction target of 15% below 2008 levels by 2020. The City is expected to exceed this goal with a net reduction of 387,998 $MTCO_2e$ from the 2020 BAU forecast. A reduction of 321,534 $MTCO_2e$ would be accomplished by state and county measures, through the implementation of AB 32, SB 375, AB 1493, the Renewable Portfolio Standard, and updates to the Title 24 Standards. An additional 66,464 $MTC0_2e$ is expected to be accomplished by the City itself, through local reduction measures, as described in further detail within the Plan.

The CAP references the SANBAG GHG Reduction Plan for the City of Fontana's 2008 GHG emissions inventory, 2020 business-as-usual forecast, 2020 reduction target, and GHG reduction measures. The CAP also goes into further detail on these sections and also offers an account of how the City of Fontana would implement and monitor this CAP.

3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed project under consideration would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Consistent with the State CEQA Guidelines, the City may use adopted GHG reduction plans to assess the impacts of discretionary projects on climate change. In addition, the guidelines provide a mechanism to streamline the development review process for future projects.

A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin (Basin) has not been established by the South Coast Air Quality Management District (SCAQMD) for projects where it is not the lead agency. As an interim threshold based on guidance provided in the CAPCOA CEQA and Climate Change handbook, 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 ($MTCO_2E$) per year for industrial projects. This threshold is based on the review of 711 CEQA projects. This threshold has also been adopted by the SCAQMD for industrial projects where it is the lead agency.

IMPACTS AND MITIGATION MEASURES

Impact 3-1: Potential to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (less than significant with mitigation)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the proposed project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage.

The proposed project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)™ (v.2013.2.2). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e$), based on the global warming potential of the individual pollutants.

Short-Term Construction GHG Emissions: Estimated increases in GHG emissions associated with construction of the proposed project are summarized in **Table 3-2**.

TABLE 3-2: CONSTRUCTION GHG EMISSIONS (UNMITIGATED METRIC TONS/YR)

	Bio- CO_2	*NBio- CO_2*	*Total CO_2*	*CH_4*	*N_2O*	*CO_2e*
2016	0.0000	763.7202	763.7202	0.1148	0.0000	766.1311
2017	0.0000	325.0847	325.0847	0.0416	0.0000	325.9580
Total	**0.0000**	**1,088.8049**	**1,088.8049**	**0.1564**	**0.0000**	**1,092.0891**

SOURCES: CALEEMOD (V.2013.2.2)

As presented in the table, short-term construction emissions of GHG associated are estimated to be 1,092.0891 $MTCO_2e$. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change in the long-term. Over a 30-year period, the proposed project's GHG emissions (amortized) would be approximately 36 $MTCO_2e$/year. Due to the size of the proposed project, the project's estimated construction-related GHG contribution to global climate change would be considered negligible on the overall global emissions scale.

Long-Term Operational GHG Emissions: The long-term operational GHG emissions estimate for the proposed project incorporates the project's potential area source and vehicle emissions, and emissions associated with utility and water usage, and wastewater and solid waste generation.

Consistent with the SCAQMD's threshold of 10,000 $MTCO_2e$/year for industrial projects, the project's operational GHG emission were evaluated in order to determine the project's net annual emissions. **Table 3-3** presents the projects net annual operational GHG emissions, estimated to be approximately 1,362 $MTCO_2e$.

TABLE 3-3: OPERATIONAL GHG EMISSIONS (UNMITIGATED METRIC TONS/YR)

	Bio- CO_2	*NBio- CO_2*	*Total CO_2*	*CH_4*	*N_2O*	*CO_2e*
Area	0.0000	0.0129	0.0129	4.0000-005	0.0000	0.0136
Energy	0.0000	627.9935	627.9935	0.0242	7.5200e-003	630.8314
Mobile	0.0000	475.8989	475.8989	0.0191	0.0000	476.3003
Waste	77.8592	0.0000	77.8592	4.6014	0.0000	174.4875
Water	3.6846	65.9078	69.5925	0.3815	9.5600e-003	80.5679
Total	**81.5438**	**1,169.8131**	**1,251.3569**	**5.0262**	**0.0171**	**1,362.2007**

SOURCES: CALEEMOD (V.2013.2.2)

Consequently, the proposed project would not exceed the SCAQMD's threshold of 10,000 metric $MTCO_2e$/year.

Conclusion: As stated previously, short-term construction GHG emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed project. Additionally, operational GHG emissions associated with the proposed project would not exceed the SCAQMD threshold of 10,000 metric $MTCO_2e$/year. Therefore, the proposed project would not hinder the State's ability to reach the GHG reduction target nor conflict with any applicable plan, policy, or regulation related to GHG reduction, and impacts related to GHG emissions and global climate change would be considered ***less than significant***.

MITIGATION MEASURES

None Required

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APPENDIX A

SUMMER EMISSIONS

Fontana Air Quality and GHG Emissions Study

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	91.00	1000sqft	2.09	91,000.00	0
Automobile Care Center	6.00	1000sqft	0.14	6,000.00	0
General Office Building	14.00	1000sqft	0.32	14,000.00	0
Parking Lot	408.36	1000sqft	9.37	408,364.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided by Project Applicant. The General Office relates to project office space. The 91,000 sq.ft. space refers to the parts/service and service bay area, the 6,000 sq.ft. space refers to the retail portion.

Vehicle Trips - Trip Rates for mobile trip-generating uses derived from the info provided by the project applicant: 552 autos/day; 90 trucks/day; and 105,000 building sq. ft.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Area Coating -

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD Rule 1113

Architectural Coating - SCAQMD 1113.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	150
tblLandUse	LandUseSquareFeet	408,360.00	408,364.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5655	74.9183	50.5151	0.0744	18.2675	3.5859	21.2076	9.9840	3.2990	12.6890	0.0000	6,939.9372	6,939.9372	1.9466	0.0000	6,980.8155
2017	86.1789	34.1262	38.9391	0.0744	2.8478	1.9074	4.7552	0.7661	1.7890	2.5551	0.0000	6,785.1523	6,785.1523	0.7727	0.0000	6,801.3788
Total	**92.7444**	**109.0445**	**89.4542**	**0.1487**	**21.1153**	**5.4933**	**25.9628**	**10.7502**	**5.0881**	**15.2441**	**0.0000**	**13,725.0894**	**13,725.0894**	**2.7193**	**0.0000**	**13,782.1944**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2016	6.5655	74.9183	50.5151	0.0744	8.3310	3.5859	11.2712	4.5222	3.2990	7.2271	0.0000	6,939.9371	6,939.9371	1.9466	0.0000	6,980.8155
2017	86.1789	34.1262	38.9391	0.0744	2.8478	1.9074	4.7552	0.7661	1.7890	2.5551	0.0000	6,785.1523	6,785.1523	0.7727	0.0000	6,801.3788
Total	**92.7444**	**109.0445**	**89.4542**	**0.1487**	**11.1789**	**5.4933**	**16.0264**	**5.2883**	**5.0881**	**9.7823**	**0.0000**	**13,725.0894**	**13,725.0894**	**2.7193**	**0.0000**	**13,782.1944**

	ROG	NOx	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**	**47.06**	**0.00**	**38.27**	**50.81**	**0.00**	**35.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0712	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Energy	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
Mobile	18.8644	36.1588	151.6684	0.2881	18.1419	0.4435	18.5854	4.8453	0.4081	5.2533		24,551.2652	24,551.2652	0.9477		24,571.1667
Total	**30.0325**	**37.0404**	**152.4625**	**0.2934**	**18.1419**	**0.5106**	**18.6525**	**4.8453**	**0.4752**	**5.3205**		**25,608.6649**	**25,608.6649**	**0.9683**	**0.0194**	**25,635.0075**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	10.7582	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Energy	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
Mobile	18.8644	36.1588	151.6684	0.2881	18.1419	0.4435	18.5854	4.8453	0.4081	5.2533		24,551.2652	24,551.2652	0.9477		24,571.1667
Total	**29.7195**	**37.0404**	**152.4625**	**0.2934**	**18.1419**	**0.5106**	**18.6525**	**4.8453**	**0.4752**	**5.3205**		**25,608.6649**	**25,608.6649**	**0.9683**	**0.0194**	**25,635.0075**

	ROG	NOx	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	**1.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/11/2016	5	10	
3	Grading	Grading	2/12/2016	3/24/2016	5	30	
4	Building Construction	Building Construction	3/25/2016	5/18/2017	5	300	
5	Paving	Paving	5/19/2017	6/15/2017	5	20	
6	Architectural Coating	Architectural Coating	6/16/2017	7/13/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 184,876; Non-Residential Outdoor: 61,625 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	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
Demolition	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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	207.00	85.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	41.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0645	0.0784	1.0333	2.1100e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		175.1667	175.1667	8.7000e-003		175.3494
Total	**0.0645**	**0.0784**	**1.0333**	**2.1100e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**175.1667**	**175.1667**	**8.7000e-003**		**175.3494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0645	0.0784	1.0333	2.1100e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		175.1667	175.1667	8.7000e-003		175.3494
Total	**0.0645**	**0.0784**	**1.0333**	**2.1100e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**175.1667**	**175.1667**	**8.7000e-003**		**175.3494**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0774	0.0941	1.2399	2.5300e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		210.2000	210.2000	0.0104		210.4193
Total	**0.0774**	**0.0941**	**1.2399**	**2.5300e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**210.2000**	**210.2000**	**0.0104**		**210.4193**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544

Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**8.1298**	**2.9387**	**11.0685**	**4.4688**	**2.7036**	**7.1724**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0774	0.0941	1.2399	2.5300e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		210.2000	210.2000	0.0104		210.4193
Total	**0.0774**	**0.0941**	**1.2399**	**2.5300e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**210.2000**	**210.2000**	**0.0104**		**210.4193**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0860	0.1046	1.3777	2.8100e-003	0.2236	1.6600e-003	0.2252	0.0593	1.5200e-003	0.0608		233.5556	233.5556	0.0116		233.7992
Total	**0.0860**	**0.1046**	**1.3777**	**2.8100e-003**	**0.2236**	**1.6600e-003**	**0.2252**	**0.0593**	**1.5200e-003**	**0.0608**		**233.5556**	**233.5556**	**0.0116**		**233.7992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**3.9030**	**3.5842**	**7.4872**	**1.6184**	**3.2975**	**4.9159**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0860	0.1046	1.3777	2.8100e-003	0.2236	1.6600e-003	0.2252	0.0593	1.5200e-003	0.0608		233.5556	233.5556	0.0116		233.7992
Total	**0.0860**	**0.1046**	**1.3777**	**2.8100e-003**	**0.2236**	**1.6600e-003**	**0.2252**	**0.0593**	**1.5200e-003**	**0.0608**		**233.5556**	**233.5556**	**0.0116**		**233.7992**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7204	7.4235	8.4339	0.0185	0.5340	0.1229	0.6569	0.1525	0.1130	0.2655		1,853.3509	1,853.3509	0.0133		1,853.6311
Worker	0.8905	1.0822	14.2590	0.0291	2.3138	0.0172	2.3309	0.6136	0.0158	0.6294		2,417.2999	2,417.2999	0.1201		2,419.8219
Total	**1.6109**	**8.5056**	**22.6930**	**0.0476**	**2.8478**	**0.1400**	**2.9878**	**0.7661**	**0.1288**	**0.8949**		**4,270.6508**	**4,270.6508**	**0.1334**		**4,273.4530**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7204	7.4235	8.4339	0.0185	0.5340	0.1229	0.6569	0.1525	0.1130	0.2655		1,853.3509	1,853.3509	0.0133		1,853.6311
Worker	0.8905	1.0822	14.2590	0.0291	2.3138	0.0172	2.3309	0.6136	0.0158	0.6294		2,417.2999	2,417.2999	0.1201		2,419.8219
Total	**1.6109**	**8.5056**	**22.6930**	**0.0476**	**2.8478**	**0.1400**	**2.9878**	**0.7661**	**0.1288**	**0.8949**		**4,270.6508**	**4,270.6508**	**0.1334**		**4,273.4530**

3.5 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	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6654	6.7503	8.0018	0.0185	0.5341	0.1096	0.6437	0.1525	0.1008	0.2533		1,822.8555	1,822.8555	0.0129		1,823.1263
Worker	0.7912	0.9702	12.8082	0.0291	2.3138	0.0165	2.3303	0.6136	0.0153	0.6289		2,322.4915	2,322.4915	0.1101		2,324.8035
Total	**1.4566**	**7.7206**	**20.8100**	**0.0475**	**2.8478**	**0.1261**	**2.9740**	**0.7661**	**0.1161**	**0.8822**		**4,145.3470**	**4,145.3470**	**0.1230**		**4,147.9298**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6654	6.7503	8.0018	0.0185	0.5341	0.1096	0.6437	0.1525	0.1008	0.2533		1,822.8555	1,822.8555	0.0129		1,823.1263
Worker	0.7912	0.9702	12.8082	0.0291	2.3138	0.0165	2.3303	0.6136	0.0153	0.6289		2,322.4915	2,322.4915	0.1101		2,324.8035
Total	**1.4566**	**7.7206**	**20.8100**	**0.0475**	**2.8478**	**0.1261**	**2.9740**	**0.7661**	**0.1161**	**0.8822**		**4,145.3470**	**4,145.3470**	**0.1230**		**4,147.9298**

3.6 Paving - 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	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	1.2275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.1348**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	1.2275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.1348**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

3.7 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	85.6899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**86.0222**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1567	0.1922	2.5369	5.7600e-003	0.4583	3.2700e-003	0.4616	0.1215	3.0200e-003	0.1246		460.0104	460.0104	0.0218		460.4683
Total	**0.1567**	**0.1922**	**2.5369**	**5.7600e-003**	**0.4583**	**3.2700e-003**	**0.4616**	**0.1215**	**3.0200e-003**	**0.1246**		**460.0104**	**460.0104**	**0.0218**		**460.4683**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.6899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**86.0222**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1567	0.1922	2.5369	5.7600e-003	0.4583	3.2700e-003	0.4616	0.1215	3.0200e-003	0.1246		460.0104	460.0104	0.0218		460.4683
Total	**0.1567**	**0.1922**	**2.5369**	**5.7600e-003**	**0.4583**	**3.2700e-003**	**0.4616**	**0.1215**	**3.0200e-003**	**0.1246**		**460.0104**	**460.0104**	**0.0218**		**460.4683**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	18.8644	36.1588	151.6684	0.2881	18.1419	0.4435	18.5854	4.8453	0.4081	5.2533		24,551.2652	24,551.2652	0.9477		24,571.1667
Mitigated	18.8644	36.1588	151.6684	0.2881	18.1419	0.4435	18.5854	4.8453	0.4081	5.2533		24,551.2652	24,551.2652	0.9477		24,571.1667

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	5,642.00	5,642.00	5642.00	7,557,752	7,557,752
Automobile Care Center	372.00	372.00	372.00	498,313	498,313
General Office Building	154.14	33.18	13.72	376,267	376,267
Parking Lot	0.00	0.00	0.00		
Total	6,168.14	6,047.18	6,027.72	8,432,331	8,432,331

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-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471808	0.065740	0.172776	0.155900	0.055970	0.009039	0.016651	0.041094	0.001122	0.001334	0.004921	0.000712	0.002932

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
NaturalGas Unmitigated	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	547.233	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3803	64.3803	1.2300e-003	1.1800e-003	64.7722
Automobile Care Center	8299.7	0.0895	0.8137	0.6835	4.8800e-003		0.0618	0.0618		0.0618	0.0618		976.4351	976.4351	0.0187	0.0179	982.3776
General Office Building	140	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4706	16.4706	3.2000e-004	3.0000e-004	16.5708
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
Total		**0.0969**	**0.8811**	**0.7401**	**5.2800e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,057.2861**	**1,057.2861**	**0.0203**	**0.0194**	**1,063.7205**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	8.2997	0.0895	0.8137	0.6835	4.8800e-003		0.0618	0.0618		0.0618	0.0618		976.4351	976.4351	0.0187	0.0179	982.3776
General Office Building	0.14	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4706	16.4706	3.2000e-004	3.0000e-004	16.5708
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
Automobile Care Center	0.547233	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3803	64.3803	1.2300e-003	1.1800e-003	64.7722
Total		**0.0969**	**0.8811**	**0.7401**	**5.2800e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,057.2861**	**1,057.2861**	**0.0203**	**0.0194**	**1,063.7205**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	11.0712	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Mitigated	10.7582	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.2834					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2100e-003	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Total	**11.0712**	**5.1000e-004**	**0.0540**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1137**	**0.1137**	**3.2000e-004**		**0.1203**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.2834					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2100e-003	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Total	**10.7582**	**5.1000e-004**	**0.0540**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1137**	**0.1137**	**3.2000e-004**		**0.1203**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

WINTER EMISSIONS

Fontana Air Quality and GHG Emissions Study

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	91.00	1000sqft	2.09	91,000.00	0
Automobile Care Center	6.00	1000sqft	0.14	6,000.00	0
General Office Building	14.00	1000sqft	0.32	14,000.00	0
Parking Lot	408.36	1000sqft	9.37	408,364.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided by Project Applicant. The General Office relates to project office space. The 91,000 sq.ft. space refers to the parts/service and service bay area, the 6,000 sq.ft. space refers to the retail portion.

Vehicle Trips - Trip Rates for mobile trip-generating uses derived from the info provided by the project applicant: 552 autos/day; 90 trucks/day; and 105,000 building sq. ft.

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Area Coating -

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD Rule 1113

Architectural Coating - SCAQMD 1113.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	150
tblLandUse	LandUseSquareFeet	408,360.00	408,364.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.5603	74.9255	50.3157	0.0716	18.2675	3.5859	21.2076	9.9840	3.2990	12.6890	0.0000	6,709.0324	6,709.0324	1.9466	0.0000	6,749.9108
2017	86.1689	34.3693	38.3012	0.0716	2.8478	1.9084	4.7562	0.7661	1.7900	2.5561	0.0000	6,562.5936	6,562.5936	0.7731	0.0000	6,578.8285
Total	**92.7292**	**109.2948**	**88.6169**	**0.1432**	**21.1153**	**5.4943**	**25.9639**	**10.7502**	**5.0890**	**15.2451**	**0.0000**	**13,271.6260**	**13,271.6260**	**2.7197**	**0.0000**	**13,328.7393**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2016	6.5603	74.9255	50.3157	0.0716	8.3310	3.5859	11.2712	4.5222	3.2990	7.2271	0.0000	6,709.0324	6,709.0324	1.9466	0.0000	6,749.9108
2017	86.1689	34.3693	38.3012	0.0716	2.8478	1.9084	4.7562	0.7661	1.7900	2.5561	0.0000	6,562.5936	6,562.5936	0.7731	0.0000	6,578.8285
Total	**92.7292**	**109.2948**	**88.6169**	**0.1432**	**11.1789**	**5.4943**	**16.0274**	**5.2883**	**5.0890**	**9.7832**	**0.0000**	**13,271.6260**	**13,271.6260**	**2.7197**	**0.0000**	**13,328.7393**

	ROG	NOx	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**	**47.06**	**0.00**	**38.27**	**50.81**	**0.00**	**35.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0712	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Energy	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
Mobile	18.3503	37.5008	151.7724	0.2688	18.1419	0.4475	18.5894	4.8453	0.4117	5.2570		22,974.4665	22,974.4665	0.9498		22,994.4122
Total	**29.5184**	**38.3824**	**152.5665**	**0.2741**	**18.1419**	**0.5146**	**18.6565**	**4.8453**	**0.4789**	**5.3242**		**24,031.8663**	**24,031.8663**	**0.9704**	**0.0194**	**24,058.2530**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	10.7582	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Energy	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
Mobile	18.3503	37.5008	151.7724	0.2688	18.1419	0.4475	18.5894	4.8453	0.4117	5.2570		22,974.4665	22,974.4665	0.9498		22,994.4122
Total	**29.2054**	**38.3824**	**152.5665**	**0.2741**	**18.1419**	**0.5146**	**18.6565**	**4.8453**	**0.4789**	**5.3242**		**24,031.8663**	**24,031.8663**	**0.9704**	**0.0194**	**24,058.2530**

	ROG	NOx	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	**1.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/28/2016	5	20	
2	Site Preparation	Site Preparation	1/29/2016	2/11/2016	5	10	
3	Grading	Grading	2/12/2016	3/24/2016	5	30	
4	Building Construction	Building Construction	3/25/2016	5/18/2017	5	300	
5	Paving	Paving	5/19/2017	6/15/2017	5	20	
6	Architectural Coating	Architectural Coating	6/16/2017	7/13/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 184,876; Non-Residential Outdoor: 61,625 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	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	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	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
Demolition	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
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	207.00	85.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	41.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**		**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0838	0.8837	1.9200e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		159.5607	159.5607	8.7000e-003		159.7434
Total	**0.0606**	**0.0838**	**0.8837**	**1.9200e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**159.5607**	**159.5607**	**8.7000e-003**		**159.7434**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365	0.0000	4,089.2841	4,089.2841	1.1121		4,112.6374
Total	**4.2876**	**45.6559**	**35.0303**	**0.0399**		**2.2921**	**2.2921**		**2.1365**	**2.1365**	**0.0000**	**4,089.2841**	**4,089.2841**	**1.1121**		**4,112.6374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0838	0.8837	1.9200e-003	0.1677	1.2400e-003	0.1689	0.0445	1.1400e-003	0.0456		159.5607	159.5607	8.7000e-003		159.7434
Total	**0.0606**	**0.0838**	**0.8837**	**1.9200e-003**	**0.1677**	**1.2400e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**159.5607**	**159.5607**	**8.7000e-003**		**159.7434**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.1005	1.0604	2.3000e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		191.4728	191.4728	0.0104		191.6921
Total	**0.0727**	**0.1005**	**1.0604**	**2.3000e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**191.4728**	**191.4728**	**0.0104**		**191.6921**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544

Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**8.1298**	**2.9387**	**11.0685**	**4.4688**	**2.7036**	**7.1724**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0727	0.1005	1.0604	2.3000e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		191.4728	191.4728	0.0104		191.6921
Total	**0.0727**	**0.1005**	**1.0604**	**2.3000e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**191.4728**	**191.4728**	**0.0104**		**191.6921**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**8.6733**	**3.5842**	**12.2576**	**3.5965**	**3.2975**	**6.8940**		**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.1117	1.1783	2.5600e-003	0.2236	1.6600e-003	0.2252	0.0593	1.5200e-003	0.0608		212.7476	212.7476	0.0116		212.9913
Total	**0.0808**	**0.1117**	**1.1783**	**2.5600e-003**	**0.2236**	**1.6600e-003**	**0.2252**	**0.0593**	**1.5200e-003**	**0.0608**		**212.7476**	**212.7476**	**0.0116**		**212.9913**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	**6.4795**	**74.8137**	**49.1374**	**0.0617**	**3.9030**	**3.5842**	**7.4872**	**1.6184**	**3.2975**	**4.9159**	**0.0000**	**6,414.9807**	**6,414.9807**	**1.9350**		**6,455.6154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0808	0.1117	1.1783	2.5600e-003	0.2236	1.6600e-003	0.2252	0.0593	1.5200e-003	0.0608		212.7476	212.7476	0.0116		212.9913
Total	**0.0808**	**0.1117**	**1.1783**	**2.5600e-003**	**0.2236**	**1.6600e-003**	**0.2252**	**0.0593**	**1.5200e-003**	**0.0608**		**212.7476**	**212.7476**	**0.0116**		**212.9913**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7664	7.6238	9.6849	0.0183	0.5340	0.1241	0.6581	0.1525	0.1141	0.2666		1,837.8086	1,837.8086	0.0137		1,838.0971
Worker	0.8364	1.1563	12.1949	0.0265	2.3138	0.0172	2.3309	0.6136	0.0158	0.6294		2,201.9375	2,201.9375	0.1201		2,204.4595

Total	**1.6028**	**8.7801**	**21.8798**	**0.0448**	**2.8478**	**0.1413**	**2.9891**	**0.7661**	**0.1299**	**0.8960**		**4,039.7460**	**4,039.7460**	**0.1338**		**4,042.5566**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7664	7.6238	9.6849	0.0183	0.5340	0.1241	0.6581	0.1525	0.1141	0.2666		1,837.8086	1,837.8086	0.0137		1,838.0971
Worker	0.8364	1.1563	12.1949	0.0265	2.3138	0.0172	2.3309	0.6136	0.0158	0.6294		2,201.9375	2,201.9375	0.1201		2,204.4595
Total	**1.6028**	**8.7801**	**21.8798**	**0.0448**	**2.8478**	**0.1413**	**2.9891**	**0.7661**	**0.1299**	**0.8960**		**4,039.7460**	**4,039.7460**	**0.1338**		**4,042.5566**

3.5 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	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7074	6.9279	9.2514	0.0183	0.5341	0.1107	0.6447	0.1525	0.1018	0.2543		1,807.5276	1,807.5276	0.0133		1,807.8067
Worker	0.7406	1.0357	10.9207	0.0265	2.3138	0.0165	2.3303	0.6136	0.0153	0.6289		2,115.2607	2,115.2607	0.1101		2,117.5728
Total	**1.4480**	**7.9637**	**20.1721**	**0.0448**	**2.8478**	**0.1272**	**2.9750**	**0.7661**	**0.1170**	**0.8831**		**3,922.7883**	**3,922.7883**	**0.1234**		**3,925.3795**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7074	6.9279	9.2514	0.0183	0.5341	0.1107	0.6447	0.1525	0.1018	0.2543		1,807.5276	1,807.5276	0.0133		1,807.8067
Worker	0.7406	1.0357	10.9207	0.0265	2.3138	0.0165	2.3303	0.6136	0.0153	0.6289		2,115.2607	2,115.2607	0.1101		2,117.5728
Total	**1.4480**	**7.9637**	**20.1721**	**0.0448**	**2.8478**	**0.1272**	**2.9750**	**0.7661**	**0.1170**	**0.8831**		**3,922.7883**	**3,922.7883**	**0.1234**		**3,925.3795**

3.6 Paving - 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	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	1.2275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.1348**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	1.2275					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.1348**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

3.7 Architectural Coating - 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	lb/day										lb/day					
Archit. Coating	85.6899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**86.0222**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1467	0.2052	2.1630	5.2400e-003	0.4583	3.2700e-003	0.4616	0.1215	3.0200e-003	0.1246		418.9647	418.9647	0.0218		419.4226
Total	**0.1467**	**0.2052**	**2.1630**	**5.2400e-003**	**0.4583**	**3.2700e-003**	**0.4616**	**0.1215**	**3.0200e-003**	**0.1246**		**418.9647**	**418.9647**	**0.0218**		**419.4226**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	85.6899					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**86.0222**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1467	0.2052	2.1630	5.2400e-003	0.4583	3.2700e-003	0.4616	0.1215	3.0200e-003	0.1246		418.9647	418.9647	0.0218		419.4226
Total	**0.1467**	**0.2052**	**2.1630**	**5.2400e-003**	**0.4583**	**3.2700e-003**	**0.4616**	**0.1215**	**3.0200e-003**	**0.1246**		**418.9647**	**418.9647**	**0.0218**		**419.4226**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.3503	37.5008	151.7724	0.2688	18.1419	0.4475	18.5894	4.8453	0.4117	5.2570		22,974.4665	22,974.4665	0.9498		22,994.4122
Unmitigated	18.3503	37.5008	151.7724	0.2688	18.1419	0.4475	18.5894	4.8453	0.4117	5.2570		22,974.4665	22,974.4665	0.9498		22,994.4122

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	5,642.00	5,642.00	5642.00	7,557,752	7,557,752
Automobile Care Center	372.00	372.00	372.00	498,313	498,313
General Office Building	154.14	33.18	13.72	376,267	376,267
Parking Lot	0.00	0.00	0.00		
Total	6,168.14	6,047.18	6,027.72	8,432,331	8,432,331

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
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471808	0.065740	0.172776	0.155900	0.055970	0.009039	0.016651	0.041094	0.001122	0.001334	0.004921	0.000712	0.002932

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205
NaturalGas Unmitigated	0.0969	0.8811	0.7401	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,057.2861	1,057.2861	0.0203	0.0194	1,063.7205

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	547.233	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3803	64.3803	1.2300e-003	1.1800e-003	64.7722
Automobile Care Center	8299.7	0.0895	0.8137	0.6835	4.8800e-003		0.0618	0.0618		0.0618	0.0618		976.4351	976.4351	0.0187	0.0179	982.3776
General Office Building	140	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4706	16.4706	3.2000e-004	3.0000e-004	16.5708

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
Total		**0.0969**	**0.8811**	**0.7401**	**5.2800e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,057.2861**	**1,057.2861**	**0.0203**	**0.0194**	**1,063.7205**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	8.2997	0.0895	0.8137	0.6835	4.8800e-003		0.0618	0.0618		0.0618	0.0618		976.4351	976.4351	0.0187	0.0179	982.3776
General Office Building	0.14	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003		16.4706	16.4706	3.2000e-004	3.0000e-004	16.5708
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
Automobile Care Center	0.547233	5.9000e-003	0.0537	0.0451	3.2000e-004		4.0800e-003	4.0800e-003		4.0800e-003	4.0800e-003		64.3803	64.3803	1.2300e-003	1.1800e-003	64.7722
Total		**0.0969**	**0.8811**	**0.7401**	**5.2800e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,057.2861**	**1,057.2861**	**0.0203**	**0.0194**	**1,063.7205**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Mitigated	10.7582	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Unmitigated	11.0712	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7826					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.2834					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2100e-003	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Total	**11.0712**	**5.1000e-004**	**0.0540**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1137**	**0.1137**	**3.2000e-004**		**0.1203**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4695					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.2834					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2100e-003	5.1000e-004	0.0540	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1137	0.1137	3.2000e-004		0.1203
Total	**10.7582**	**5.1000e-004**	**0.0540**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1137**	**0.1137**	**3.2000e-004**		**0.1203**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation