AIR QUALITY ASSESSMENT
FOR
TOWN OF YUCCA VALLEY
PRESCOTT RETAIL CENTER

Prepared for:

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1.0 INTRODUCTION

Force-Gottlieb, LLC proposes to construct the Prescott Retail Center (Center) on approximately 6 acres located on the northeast corner of Prescott Avenue and Palisade Avenue in the Town of Yucca Valley. Development of the Center will include the following land uses: Fast Food Restaurant, Shopping Center, and Medical-Dental Offices. Refer to Figures 1, 2, and 3 for a regional location map, project vicinity map and site plan, respectively.

This report is a study of the potential impacts the project may have on the local and regional air quality in the vicinity during the construction period and ultimate use ("operation") of the Center. This air quality assessment discusses the existing air quality in the vicinity/region and the potential air quality impacts associated with the planned project including climate change. Background material, including air quality emissions data output, is included in Appendix A.

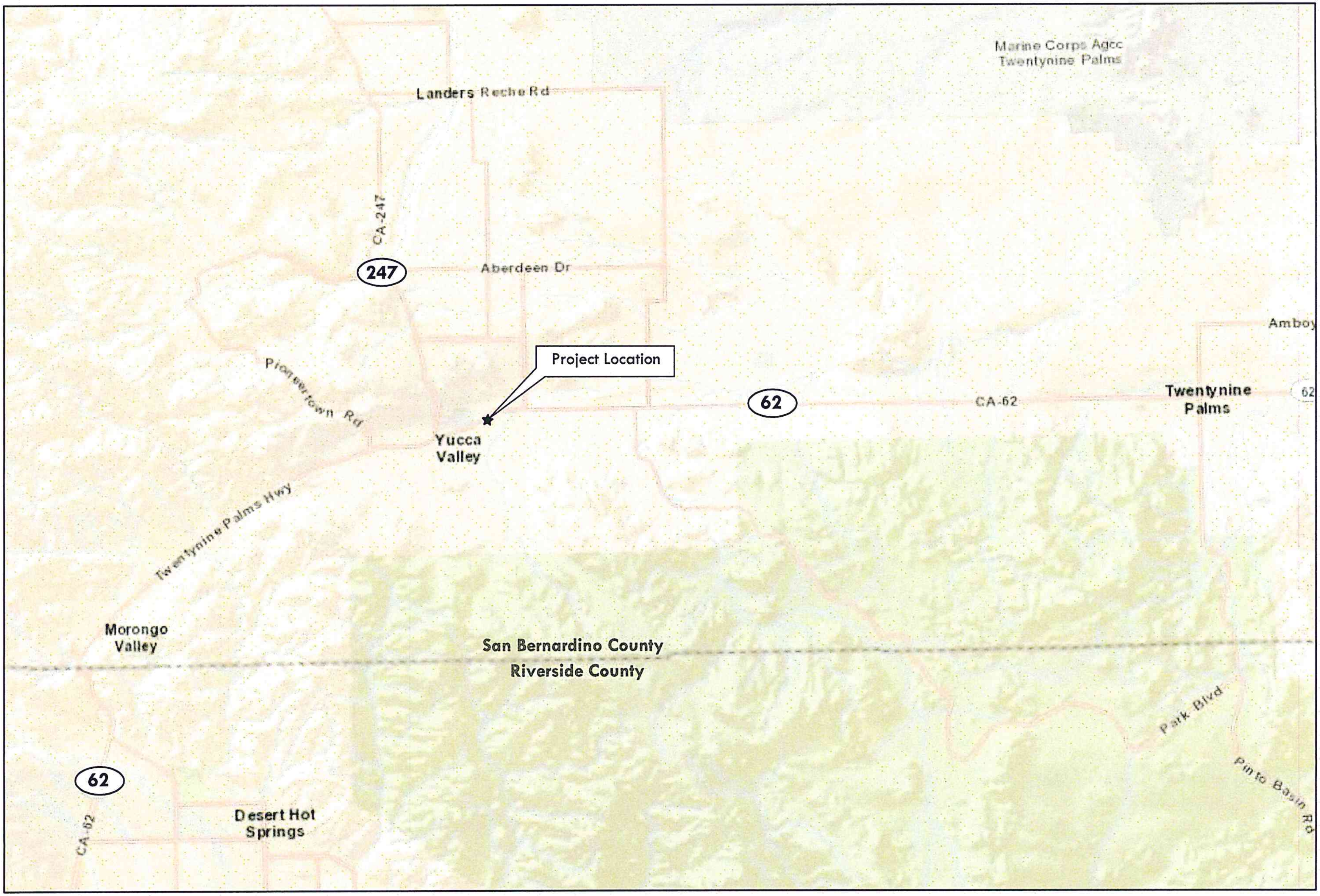
2.0 GENERAL SETTING

The site is in the Mojave Desert Air Basin (MDAB), an approximate 21,000 square mile area under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The MDAB encompasses the desert portion of San Bernardino County and the Palo Verde Valley in eastern Riverside County. The MDAQMD has jurisdiction over that portion of the MDAB within San Bernardino and Riverside counties that includes the Town of Yucca Valley. This area generally includes the portion of San Bernardino County north of the San Gabriel and San Bernardino mountains and the most eastern portion of Riverside County.

The desert portion of San Bernardino County is commonly referred to as the High Desert because of its altitude at approximately 1,000 to 4,500 feet above mean sea level. The region is characterized by a series of low mountain ranges and broad alluvial valleys. The area south of the mountains including the San Bernardino Valley is located within the South Coast Air Basin (SCAB) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

The High Desert region that includes the Town of Yucca Valley is influenced by the San Bernardino and San Jacinto mountain ranges that represent the southerly boundary of the region. These mountain ranges rise to an average of 7,500 feet and are divided by the Banning Pass. The project site is located within Yucca Valley, north of Palm Springs at an average elevation of 3,250 feet above mean sea level.

A major factor that influences the MDAB's ambient air quality is its location downwind from the South Coast Air Basin with its substantial pollution sources. Due to the meteorological and topographical factors of the region, air pollutants from the South Coast Air Basin are transported into the MDAB via the Banning Pass contributing significantly to the ozone violations that occur in the Coachella Valley and the Yucca Valley. With the overall reduction in pollutant levels in the South Coast Air Basin, the result has been a decline in ozone violations in the MDAB.



REGIONAL LOCATION

Prescott Retail Center Air Quality Assessment
Town of Yucca Valley, California

Figure 1

N
0 3.75
Approximate Miles

LILBURN CORPORATION

PROJECT LOCATION

Prescott Retail Center Air Quality Assessment
Town of Yucca Valley, California

Figure 2

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2.1 CLIMATE

The High Desert is classified as an arid desert climate. In the Mojave Desert, this is modified by the San Bernardino and San Jacinto mountains forming barriers to precipitation. The rain shadow causes the aridity of the High Desert climate, while leaving the summers hot and the winters generally mild.

For most of the summer, the region is under the northern edge of the Pacific Subtropical Ridge that limits cloud formation and allows strong daytime heating. This is a zone with no dominant winds, which allows more local effects such as the sea breeze passing through the Banning Pass to control the local weather. The high pressure systems also contribute to the presence of persistent inversion layers that trap pollutants by preventing their dispersion through vertical mixing. In late summer, the ridge can move far enough north to allow humid air from the Gulf of California, and even as far east as the Gulf of Mexico, into the High Desert. When this happens, thunderstorms may form, causing isolated flash floods and high wind gusts.

Average high temperatures in summer are in the mid 90s to 100° Fahrenheit (F). Average low temperatures are in the mid 60s to 70s. During winter, the Polar Front Jet stream steers pressure systems from west to east across the region. Mild rains result from systems steered in from the southwest and northwest. Winter storm systems are often followed by periods of clear skies and strong westerly or northerly winds. Average high temperatures in winter are in the mid 50s and average low temperatures are in the mid 30s.

Three weather factors have significant impacts on air quality; wind, precipitation and inversion layers. Each of these is discussed below.

<u>Wind</u>

Although the High Desert is 80 miles from the ocean, the sea breeze can be a dominant weather feature. The sea breeze is caused by differential heating of land and water. Land heats faster than the ocean, and because hot air rises, air warmed over land during the day rises, and cooler denser air from the ocean moves in to replace it. Normally limited to within a few miles of a coastline, the extreme differences in temperature between the desert and the Pacific Ocean make the sea breeze a regional phenomenon in southern California. The combination of extreme temperature differences and physical restraint on the air movements means there is a consistent source for strong wind blowing through Banning Pass and across the High and Low deserts. The sea breeze is a primary transportation medium, bringing pollutants out of the coastal valleys and into the desert.

<u>Precipitation</u>

The High Desert receives precipitation from winter cold fronts and moist southerly air masses during the late summer. Precipitation at Yucca Valley averages 5.23 inches a year. Summer thunderstorms bring highly variable amounts of localized rain. The rain from these storms falling into the dry air often evaporates before reaching the surface. However, if the storm lasts long enough, the area beneath the storm may get several inches of rain over a short time leading to flash floods and rapid erosion in washes and gullies. Due to its higher elevation, the project site experiences higher precipitation and infrequent winter snow.

<u>Inversions</u>

Inversions are layers in the atmosphere where the temperature increases with height instead of decreasing as is normal. Inversions trap pollutants by limiting the vertical mixing which normally disperses pollutants into the upper atmosphere. There are two types of inversions affecting the High Desert. The first is the regional inversions caused by subsiding air within the high-pressure systems that dominate the summer weather. These subsidence inversions can occur at varying altitudes, with corresponding variable effects on the pollution levels. The lower the inversion level, the greater the concentration of pollutants between it and the ground. The second type is the radiation inversion that forms when the ground cools rapidly after sunset, cooling the air immediately above it at the same time.

2.2 APPLICABLE POLICIES AND REGULATIONS

Air Quality in the MDAB

Air quality is determined primarily by the types and amounts of contaminants emitted into the atmosphere, the size and topography of the local air basin and the pollutant-dispersing properties of local weather patterns. When airborne pollutants are produced in such volume that they are not dispersed by local meteorological conditions, air quality problems result. Dispersion of pollutants in the MDAB is influenced by periodic temperature inversions, persistent meteorological conditions and the local topography. As pollutants become more concentrated in the atmosphere, photochemical reactions occur, producing ozone and other oxidants.

Another major factor that influences the MDAB's ambient air quality is its location downwind from two air basins with substantial pollution sources. Due to the meteorological and topographical factors of the region, air pollutants from the SCAB and the San Joaquin Valley Air Basin are transported into the MDAB contributing significantly to the ozone violations that occur. With the overall reduction in pollutant levels in the SCAB, the result has been a substantial decline in ozone violations in the Mojave Desert. However, with urban growth in the San Joaquin Valley rapidly increasing, and agriculture continuing to dominate that valley's economy, pollutant levels are increasing.

Air emissions from the project are subject to federal, State and local rules and regulations implemented through provisions of the federal Clean Air Act, California Clean Air Act and the rules and regulations of the California Air Resources Board (CARB) and MDAQMD. Under the provisions of the federal and California Clean Air Acts, air quality management districts with air basins not in attainment of the air quality standards are required to prepare an Air Quality Management Plan (AQMP). An AQMP establishes an area-specific program to control existing and proposed sources of air emissions so that the air quality standards may be attained by an applicable target date. The following is an overview of these rules and regulations.

Federal Clean Air Act

The federal Clean Air Act was established in an effort to assure that acceptable levels of air quality are maintained in all areas of the United States. These levels are based upon health-related exposure limits and are referred to as National Ambient Air Quality Standards (NAAQS). The NAAQS establish maximum allowable concentrations of specific pollutants in the atmosphere and characterize the amount of exposure deemed safe for the public. The NAAQS are established for carbon monoxide (CO); sulfur dioxide (SO_2); particulate matter less than 10 microns, aerodynamic diameter (PM_{10}); particulate matter less than 2.5 microns ($PM_{2.5}$); ozone (O_3); and lead (Pb).

Primary and secondary NAAQS have been established and are shown in Table 1. The table also lists California air quality standards. Primary federal standards reflect levels of air quality deemed necessary by the federal EPA to provide an adequate margin of safety to protect public health. Areas that meet the standards are designated attainment and if found to be in violation of primary standards are designated as nonattainment areas. Secondary standards reflect levels of air quality necessary to protect public welfare from known or anticipated adverse effects of a pollutant.

NAAQS have been set for a number of criteria pollutants. Following is a brief description, their health effects and whether the MDAB is in attainment for these pollutants:

Ozone (O3) is a toxic gas that irritates the lungs and damages materials and vegetation. Data summarized in Table 2 indicate that levels of ozone periodically exceed the 1-hour state standard and the 8-hour Federal standard in the project area. Data is from the Joshua Tree Air Monitoring Station. The MDAB is designated as a non-attainment basin for ozone and an Ozone Attainment Plan was prepared in 2004.

Coarse Particulate Matter (PM_{10}) consists of extremely small-suspended particles or droplets 10 microns or smaller in diameter that can lodge in lungs contributing to respiratory problems. PM_{10} arises from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations and windstorms. PM_{10} scatters light and significantly reduces visibility. PM_{10} poses a health hazard, alone or in combination with other pollutants. Table 3 shows data gathered during the last five years from the Palm Springs Air Monitoring Station, the closest station to Yucca Valley. PM_{10} levels infrequently exceed the state ambient air quality standards and exceeded the Federal standard twice over the past five years.

Fine Particulate Matter ($PM_{2.5}$) consists of extremely small-suspended particles 2.5 microns in diameter and arises primarily from combustion sources. Table 4 shows data gathered during the last five years from the Palm Springs Air Monitoring Station, the closest station to Yucca Valley. $PM_{2.5}$ levels infrequently exceed the state ambient air quality standards and did not exceed the Federal standards over the past five years.

Carbon monoxide (CO) is a gas produced almost entirely from automobiles that interferes with the transfer of oxygen to the brain. Peak levels of CO occur in winter and are highest where there is heavy traffic. AAQS have not been exceeded in the area.

Table 1
State and Federal
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	---	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 μg/m³)		0.075 ppm (147 μg/m³)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 μg/m³	Gravimetric or Beta Attenuation*	150 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		---		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	---		35 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation*	15 μg/m³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m³)	Nondispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	---	Nondispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–		
Nitrogen Dioxide (NO_2)[8]	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	Gas Phase Chemiluminescence	53 ppb (100 μg/m³)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 μg/m³)		100 ppb (188 μg/m³)[8]		
Lead[10,11]	30-day average	1.5 μg/m³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	--		0.15 μg/m³	Same as Primary Standard	
	Calendar Quarter	–		1.5 μg/m³ (for certain areas)[11]		
Sulfur Dioxide (SO_2)[9]	24-Hour	0.04 ppm (105 μg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)[9]	–	Spectrophotometry (Pararosaniline Method)
	Annual Arithmetic Mean	---		0.030 ppm (for certain areas)[9]	---	
	3-Hour	–		--	0.5 ppm (1300 μg/m³)	
	1-Hour	0.25 ppm (655 μg/m³)		75 ppd (196 μg/m³)[9]	–	
Visibility-Reducing Particles[12]	8-Hour	Beta Attenuation and Transmittance through Filter Tape[12]		No Federal Standards		
Sulfates	24-Hour	25 μg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24-Hour	0.01 ppm (26 μg/m³)	Gas Chromatography			

Source: ARB, February 2, 2012.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, The secondary SO2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO2 standard concentrations. EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM have adequately EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum of 0.14 ppm and the annual primary SO2 standard of 0.030 ppm, effective August 23, 2010. standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 2
Ozone Data from the Joshua Tree Air Monitoring Site
2007 – 2011

Year	Days Exceeding One Hour State Standard	Days Exceeding 8-Hour Fed. Standard	Days Exceeding 8-Hour State Standard	Maximum One Hour Reading (ppm)
2007	37	81	108	0.106
2008	36	72	108	0.110
2009	24	59	90	0.104
2010	19	53	90	0.105
2011	21	56	90	0.104

Source: CARB, 2013
State Standard – 0.09 ppm based on one-hour average. No Federal one-hour standard (removed in 2006).
State 8-Hour Standard 0.070ppm; Federal 8-Hour standard is 0.075 ppm.

Table 3
Particulate Matter (PM_{10}) Data from the Palm Springs Air Monitoring Site
2007 – 2011

Year	Days Exceeding State Standard	Days Exceeding Federal Standard	Maximum 24-Hour Reading (μ/m^3)
2007	*	0	83
2008	*	*	75
2009	*	0	140
2010	0	0	144
2011	0	2	396

State Standard – 50 μ/m^3 based on 24-hour average
Federal Standard – 150 μ/m^3 based on 24-hour average
μ/m^3 = micrograms per cubic meter
Measurements taken every 6 days.
* No Data
Source: CARB, 2012

Table 4
Fine Particulate Matter ($PM_{2.5}$) Data from the Palm Springs Air Monitoring Site
2007 – 2011

Year	Days Exceeding State Standard	Days Exceeding Federal Standard	Maximum 24-Hour Reading (μ/m^3)
2007	*	0	32.5
2008	*	0	18.1
2009	*	0	21.8
2010	6	0	12.8
2011	6	0	26.3

No 24-hour State Standard for PM2.5.
Federal Standard – lowered to 35 μ/m^3 in 2006; based on 24 hour average.
μ/m^3 = micrograms per cubic meter
Source: CARB, 2013
* No Data

Nitrogen dioxide (NO_2) is a gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries and other industrial operations). AAQS for NO_2 have not been violated since 1991.

Sulfur dioxide (SO_2) is a gas produced when fossil fuels are burned. SO_2 is the main pollutant contributing to the formation of acid rain. This pollutant does not exceed AAQS in the area.

Lead (Pb) is a heavy metal used in industry and for years was a component in gasoline. Since the elimination of lead as a gasoline additive lead in the atmosphere in southern California has been virtually eliminated.

California Clean Air Act

Under the federal Clean Air Act, state and local authorities have primary responsibility for assuring that their respective regions are in attainment of, or have a verifiable plan to attain, the NAAQS. The federal Clean Air Act also provides state and local agencies authority to promulgate more stringent ambient air quality standards, which is the case in California. The California Ambient Air Quality Standards (CAAQS) for the above criteria pollutants and the following pollutants are also included in Table 1:

Nitrogen dioxide (NO_2)
Hydrogen sulfide (H_2S)
Sulfates
Visibility-reducing particles

Hydrogen sulfide (H_2S). This pollutant is not commonly found in the ambient atmosphere but can originate from natural sources such as volcanoes, sulfur hot springs, or oil refineries. The state ambient air quality standard for H_2S is not health-based but rather an aesthetic one, because the compound smells like rotten eggs.

Visibility-reducing particles are common in the MDAB due to the vast open desert area, especially during windy conditions. Particles reduce visibility, obscuring the desert scenery, including views of the mountains.

Reactive Organic Gases (ROG) In addition to these pollutants ROG is also considered in the air quality analysis of projects in the state. Ozone is a secondary pollutant that is the result of chemical reactions between other pollutants, most importantly reactive hydrocarbons (also referred to as ROG), and NO_2, which occurs only in the presence of bright sunlight. The result is the formation of smog. There are no federal or state air quality standards for hydrocarbons or ROG as there are for other pollutants; however the MDAQMD does have thresholds for determining the severity of emissions of several criteria pollutants including ROG.

2.3 AIR QUALITY ATTAINMENT PLANS

The MDAQMD has local regulatory review and primary permitting and enforcement authority over potential stationary sources of air pollution within the Mojave Desert portions of San Bernardino County, including all cities and towns. The EPA and CARB serve as technical review and advisory agencies, providing technical advice and guidance when necessary.

Air Quality Attainment Plans

The MDAB is a designated nonattainment basin for ozone. In 1991 San Bernardino County Air Pollution Control District (APCD) prepared the Air Quality Attainment Plan (AQAP) for ozone. This plan established programs and control strategies to achieve the ozone standards and to maintain attainment of the other criteria pollutants. Measures in the 1991 AQAP include an updated permitting program for stationary pollution sources, reasonable control technology for all existing and future sources, provisions to develop area and indirect control programs such as land use and transportation measures and public education programs. In 1993 the APCD was separated from the County under State Assembly Bill 2522, and an autonomous agency – the MDAQMD – was created that encompassed the High Desert region of San Bernardino County.

In 1994, the EPA designated most of the Mojave Desert as nonattainment for PM_{10} based on violations of standards between 1989 and 1991. The MDAQMD prepared the Mojave Desert Planning Area (MDPA) Federal PM_{10} Attainment Plan in 1995 to provide dust control programs to meet federal PM_{10} standards by the year 2000. The MDPA covers only the southwestern portions of the Mojave Desert (Victor Valley and Lucerne Valley areas) because most of the controllable sources and receptors of PM_{10} and recording instrumentation are located in the Victor Valley. The plan outlines a program for implementation and enforcement of dust control measures. These measures are generally reflected through MDAQMD Rules 401 - Visible Emissions, 402 - Nuisance, and 403 - Fugitive Dust Control. The federal standard for PM_{10} has been met within the area for the past eight years and a change of status to attainment is currently being evaluated.

Nonattainment Designations and Classification Status

The USEPA and the CARB have designated portions of the MDAQMD as nonattainment for a variety of pollutants, and some of those designations have an associated classification. Table 5 lists these designations and classifications.

The MDAQMD has adopted attainment plans for a variety of nonattainment pollutants. Table 6 lists the attainment plans applicable to the project area.

MDAQMD regulates emissions from stationary sources through the permitting process and requires permits to Construct/Operate for all stationary equipment with the potential to release air contaminants. There is no stationary equipment proposed to be operating at the site, therefore no individual air quality permits are required.

Table 5
State and Federal Air Quality
Designations and Classifications for MDAQMD

Ambient Air Quality Standard	Status
One-hour Ozone (Federal) – (has been revoked)	Non-attainment; classified Severe-17 (portion of MDAQMD outside of Southeast Desert Modified AQMA is attainment)
Eight-hour Ozone (Federal)	Non-attainment, classified Moderate (portion of MDAQMD in Riverside County is attainment)
Ozone (State)	Non-attainment; classified Moderate
PM_{10} (Federal)	Non-attainment; classified Moderate (portion of MDAQMD in Riverside County is attainment)
$PM_{2.5}$ (Federal)	Unclassified/attainment
$PM_{2.5}$ (State)	Non-attainment (portion of MDAQMD outside of Western Mojave Desert Ozone)
PM_{10} (State)	Non-attainment
Carbon Monoxide (State and Federal)	Attainment
Nitrogen Dioxide (State and Federal)	Attainment/unclassified
Sulfur Dioxide (State and Federal)	Attainment/unclassified
Lead (State and Federal)	Attainment
Particulate Sulfate (State)	Attainment
Hydrogen Sulfide (State)	Unclassified (Searles Valley Planning Area is non-attainment)
Visibility Reducing Particles (State)	Unclassified

Source: MDAQMD CEQA and Federal Conformity Guidelines, March 2013.
http://www.mdaqmd.ca.gov/index.aspx?page=13

Table 6
MDAQMD Attainment Plans

Name of Plan	Date of Adoption	Applicable Area	Pollutant(s) Targeted	Attainment Date
1991 Air Quality Attainment Plan (AQAP)	August 26, 1991	San Bernardino County portion	NO_x and VOC	1994*
Mojave Desert Planning Area Federal Particulate Matter Attainment Plan	July 31, 1995	Mojave Desert Planning Area	PM_{10}	2000*
Triennial Revision to the 1991 Air Quality Attainment Plan	January 22, 1996	Entire District	NO_x and VOC	2005
2004 Ozone Attainment Plan (State and Federal)	April 26, 2004	Entire District	Ozone (NO_x and VOC)	2007
Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area)	9-Jun-08	Western Mojave Desert Non-attainment Area	NOx and VOC	2021

*Note: A historical attainment date given in an attainment plan does not necessarily mean that the affected area has been re-designated to attainment.
Source: MDAQMD CEQA and Federal Conformity Guidelines, February 2009. Verified March 2013

Climate Change and Greenhouse Gases

Gases that trap heat in the atmosphere are often called Greenhouse Gases (GHG); analogous to a greenhouse. GHG are emitted by natural processes and human activities. The accumulation of GHG in the atmosphere regulates the earth's temperature. Without these natural GHG, the Earth's surface would be approximately 61°F cooler (CA 2006). Emissions from human activities such as electricity production and vehicles have elevated the concentration of these gases in the atmosphere.

GHG have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (EPA 2006a). The reference gas for GWP is carbon dioxide; carbon dioxide has a GWP of one. For example, methane has a GWP of 21, which means that it has a greater global warming effect than carbon dioxide on a molecule per molecule basis. One teragram of carbon dioxide equivalent (Tg CO2 Eq.) is the emissions of the gas multiplied by the GWP. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the GWP of the gas. The atmospheric lifetime and GWP of selected GHG are summarized in Table 7. As shown in the table, GWP ranges from 1 (carbon dioxide) to 23,900 (sulfur hexafluoride).

Table 7
Global Warming Potentials and Atmospheric Lifetimes of Select Greenhouse Gases

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50 – 200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF4)	50000	6,500
PFC: Hexafluoroethane (C2F6)	10000	9,200
Sulfur Hexafluoride (SF6)	3200	23,900

Source: EPA 2006b

Water vapor is the most abundant, important, and variable GHG in the atmosphere. It is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves.

Carbon dioxide (CO2) is an odorless, colorless natural GHG. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of carbon dioxide are from burning coal, oil, natural gas, and wood. Concentrations are currently around 370 ppm; some say that concentrations may increase to 540 ppm by 2100 as a direct result of anthropogenic sources (IPCC 2001). Some predict that this will result in an average global temperature rise of at least 2° Celsius (IPCC 2001).

Methane is a flammable gas and is the main component of natural gas. When one molecule of methane is burned in the presence of oxygen, one molecule of carbon dioxide and two molecules of water are released. There are no health effects from methane. A natural source of methane is from the anaerobic decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.

Nitrous oxide (N2O), also known as laughing gas, is a colorless GHG. Higher concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, as an aerosol spray propellant, and in race cars.

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore their production was stopped as required by the Montreal Protocol.

Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs for automobile air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down though the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. Concentrations of tetrafluoromethane in the atmosphere are over 70 ppt (EPA 2006b). The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated, 23,900. Concentrations in the 1990s were about 4 ppt (EPA 2006b). Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Ozone is a GHG; however, unlike the other GHG, ozone in the troposphere is relatively short-lived and therefore is not global in nature. According to CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and VOCs) to global warming (CARB 2004). Therefore, project emissions of ozone precursors would not significantly contribute to global climate change.

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel with sulfur in it is burned. Black carbon (or soot) is emitted during bio mass burning incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

Health and Other Effects

The potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (i.e., heat rash and heat stroke). In addition, climate sensitive diseases may increase, such as those spread by mosquitoes and other disease carrying insects. Those diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture, which would have negative consequences. Drought in some areas may increase, which would decrease water and food availability. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution (EPA 2006c).

3.0 AIR QUALITY IMPACT EVALUATION

To determine if a proposed project has the potential to significantly impact the ambient air quality, the MDAQMD utilizes the following net daily emissions increase as CEQA thresholds of significance. If the potential emissions exceed these thresholds, then the project may have a significant air quality impact and requires additional analysis.

- Carbon Monoxide (CO)	548 lbs/day
- Nitrogen Dioxide (NO_2)	137 lbs/day
- Reactive Organic Gasses (ROG)	137 lbs/day
- Sulfur Dioxide (SO_2)	137 lbs/day
- Particulate Matter (PM_{10})	82 lbs/day
- Particulate Matter ($PM_{2.5}$)	82 lbs/day
- Greenhouse Gas Emissions	100,000 tons per year CO_2E

3.1 PROJECT DESCRIPTION

The proposed project is the development of the Prescott Retail Center on approximately 6 acres located on the northeast corner of Prescott Avenue and Palisade Avenue, in the Town of Yucca Valley, County of San Bernardino. Emissions generated by the proposed project would be from short-term construction activities and from operation of the Center.

3.2 CONSTRUCTION AIR QUALITY EVALUATION

The proposed project was screened using the CalEEMod version 2011.1.1 emissions model. The criteria pollutants analyzed included reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), particulates (PM_{10} and $PM_{2.5}$), carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Construction emissions are screened and quantified to document the effectiveness of control measures.

The CalEEMod model allows the user to set certain defaults and run the model to incorporate MDAQMD required rules and regulations. Therefore, per MDAQMD Rules 402 and 403, the mitigation requiring that exposed surfaces during construction be watered twice per day was "turned on". The developer and its contractor will be required to comply with mandated MDAQMD rules and regulations, including but not limited to, Rules 402 and 403. Therefore, the following dust control conditions applicable to the site activities as recommended by Rules 402 and 403 shall also be implemented:

1. The project proponent shall ensure that any portion of the site to be graded shall be pre-watered prior to the onset of grading activities.

   (a) The project proponent shall ensure that watering of the site or other soil stabilization method shall be employed on an on-going basis after the initiation of any grading activity on the site at least 2x per day. Portions of the site that are actively being graded shall be watered regularly to ensure that a crust is formed on the ground surface, and shall be watered at the end of each workday.

   (b) The project proponent shall ensure that all disturbed areas are treated to prevent erosion until the site is constructed upon.

   (c) The project proponent shall ensure that landscaped areas are installed as soon as possible to reduce the potential for wind erosion.

   (d) The project proponent shall ensure that all grading activities are suspended during first and second stage ozone episodes or when winds exceed 25 miles per hour.

During construction, exhaust emissions from construction vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces, would increase NO_X and PM_{10} levels in the area. The following mitigation measures shall be implemented to reduce impacts.

2. To reduce emissions, all equipment used in grading and construction must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel. Site development will be limited to one acre disturbed per day.
3. The contractor shall utilize (as much as possible) pre-coated building materials and coating transfer or spray equipment with high transfer efficiency, such as high volume, low pressure (HVLP) spray method, or manual coatings application such as paint brush, hand roller, trowel, dauber, rag, or sponge.
4. The contractor shall utilize water-based or low VOC coating per MDAQMD Rule 1113. The following measures shall also be implemented:
   - Use Super-Compliant VOC paints whenever possible.
   - If feasible, avoid painting during peak smog season: July, August, and September.
   - Recycle leftover paint. Take any left-over paint to a household hazardous waste center; do not mix leftover water-based and oil-based paints.
   - Keep lids closed on all paint containers when not in use to prevent VOC emissions and excessive odors.
   - For water-based paints, clean up with water only. Whenever possible, do not rinse the clean-up water down the drain or pour it directly into the ground or the storm drain. Set aside the can of clean-up water and take it to a hazardous waste center (www.cleanup.org).

- Recycle the empty paint can.
- Look for non-solvent containing stripping products.
- Use Compliant Low-VOC cleaning solvents to clean paint application equipment.
- Keep all paint and solvent laden rags in sealed containers to prevent VOC emissions.

5. The project proponent shall ensure that existing power sources are utilized where feasible via temporary power poles to avoid on-site power generation.
6. The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.
7. All buildings on the project site shall conform to energy use guidelines in Title 24 of the California Administrative Code as updated to reduce energy consumption and reduce GHG emissions.
8. The operator shall maintain and effectively utilize and schedule on site equipment and delivery trucks in order to minimize exhaust emissions from truck idling.

Modeled Analysis

The emissions calculations for the construction phase include fugitive dust from grading and exhaust emissions from on-site equipment and worker travel and are summarized in Table 8 and Table 9. The fugitive dust emissions are based on earthwork activities per day. The proposed construction activities will include implementation of the "best available fugitive dust control requirements" listed above and the developer will comply with MDAQMD rules and regulations particularly Rules 402 and 403 that require controls for fugitive dust. These standard conditions will reduce emissions to the lowest amounts feasible. Construction emissions were screened and quantified to document the effectiveness of control measures. For additional information, refer to Appendix A for the CalEEMod emissions model output data.

Table 8
Construction Emissions Summary
(Pounds Per Day)

Source/Phase	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation	11.0	89.9	61.3	0.1	13.0	9.1
Grading	7.3	55.5	34.3	0.0	6.4	4.8
Building Construction	6.2	41.4	25.4	0.0	3.0	2.8
Paving	4.6	27.9	18.9	0.0	2.7	2.4
Architectural Coating	36.5	3.2	2.1	0.0	0.3	0.3
Highest Value (lbs/day)	**36.5**	**89.9**	**61.3**	**0.1**	**13.0**	**9.1**
MDAQMD Threshold	137	137	548	137	82	82
Significant	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod 2011.1.1
Phases don't overlap and represent the highest concentration

Table 9
Greenhouse Gas Construction Emissions
MT Per Year

Source/Phase	CO_2	CH_4	N_20
Site Preparation	18.1	0.0	0.0
Grading	19.0	0.0	0.0
Building Construction	415.9	0.0	0.0
Paving	19.6	0.0	0.0
Architectural Coating	2.3	0.0	0.0
Sub Total MT	475.0		
Total (tons)	**522.5**		
MDAQMD Threshold (tons)	100,000		
Significant	**No**		

Source: CalEEMod 2011.1.1

As shown in Table 8 and Table 9, construction emissions are less than the MDAQMD thresholds and would be considered less than significant.

3.3 OPERATIONS AIR QUALITY EVALUATION

The proposed project will not include the manufacture or production of any products on-site; therefore, no industrial type emissions will be generated. Stationary source emissions associated with the operation of the site are from energy usage. The primary emissions are from mobile sources (e.g. vehicles). It is anticipated that the proposed project would generate approximately 2,748 vehicular trips a day (Traffic Impact Analysis prepared by Urban Crossroads, March 2013). Operational emissions include Mobile (vehicle trips), Energy (generation and distribution of energy to the Center), Area (Center in use), and for GHG emissions, water (generation and distribution of water to the Center), and waste (collecting and hauling waste to the landfill) emissions. Emissions associated with the operational activities are listed in Table 10 and Table 11.

Table 10
Operations Emissions Summary
(Pounds Per Day)

Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile	19.9	105.8	176.0	0.1	18.2	4.2
Energy	0.0	0.2	0.2	0.0	0.0	0.0
Area	0.7	0.0	0.0	0.0	0.0	0.0
Total Value (lbs/day)	**20.7**	**106.1**	**176.2**	**0.1**	**18.2**	**4.2**
MDAQMD Threshold	137	137	548	137	82	82
Significant	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod 2011.1.1

Table 11
Greenhouse Gas Operational Emissions
"MT Per Year"

Source	**CO_2**	**CH_4**	**N_2O**
Area	0.0	0.0	0.0
Energy	196.9	0.0	0.0
Mobile	3,178.7	0.2	0.0
Waste	26.8	1.6	0.0
Water	15.2	0.1	0.0
Total in MT Per Year	3,459.4		
Total in Tons Per Year	**3,805.0**		
MDAQMD Threshold (tons)	100,000		
Significant	**N/A**		

Source: CalEEMod 2011.1.1

As shown in Table 10 and Table 11 operational emissions of the proposed project would not exceed thresholds.

3.4 SUMMARY OF PROJECT IMPACTS

The proposed project's estimated construction emissions are listed and compared to regional thresholds in Tables 8 and 9. As shown, emissions during construction are anticipated to be less than significant.

The site is zoned for commercial development which has been previously assessed and approved per the Town's General Plan and has been included in the AQMP. The General Plan designation is included as part of the anticipated growth in the MDAB. A statement of overriding considerations was adopted for the Town of Yucca Valley's General Plan per Air Quality. The proposed project's operational emissions are summarized and compared to regional thresholds in Table 10 and Table 11. As shown, emissions during long-term operation of the project are anticipated to be less than significant.

3.5 PROJECT CUMULATIVE IMPACTS

The planned land use is required to comply with current MDAQMD regulations and will incorporate District rules and regulations to minimize impacts. The site is zoned for commercial development which has been previously assessed and approved per the Town's General Plan and has been included in the AQMP. The General Plan designation is included as part of the anticipated growth in the MDAB. A statement of overriding considerations was adopted for the Town of Yucca Valley's General Plan per Air Quality.

Compliance with GHG Global Strategies

GHG emissions are understood to be global in nature and should therefore be considered cumulative. To reduce California's GHG emissions to the levels proposed in Executive Order S-3-05, the California EPA Climate Action Team developed a report that outlines strategies for meeting the Governor's targets. Use of the strategies to determine consistency are the most appropriate to use at this time as the report "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CA 2007). AB 32 requires that a list of emission reduction strategies be published to achieve the goals set out in AB 32. However, until those reduction strategies are published, emission reduction strategies to meet Executive Order S-3-05 will be relied upon.

Compliance with GHG voluntary reduction strategies, shown in Table 12 would reduce global climate change and further reduce cumulative impacts from GHG.

Table 12
Greenhouse Gas Emission-Reduction Strategies

Strategy	Project Compliance
Vehicle Climate Change Standards AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	**Compliant.** These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Other Light Duty Vehicle Technology	
New standards would be adopted to phase in beginning in the 2017 model year	
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	**Compliant.** These are CARB enforced standards; heavy duty construction equipment/vehicles that are used for site grading/construction on the project site and delivery trucks during operations that are required to comply with the standards; therefore, they will comply with the strategy.
Achieve 50% Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48% has been achieved on a statewide basis. Therefore, a 2% additional reduction is needed.	**Compliant.** The project proposes to minimize waste through construction practices and design features. Construction generated waste will adhere to a Waste Management Plan. This usually means that lumber, cardboard, and concrete waste is hauled off site and recycled, and only the remaining non-recycled trash is disposed of.
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	**Compliant.** The project will comply with the most recent Title 24 standards.

Strategy	Project Compliance
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through state investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include: promoting jobs/housing proximity and transit-oriented development; encouraging high density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	**Compliant.** The project would provide a service to the local community, thus reducing miles driven.

Source: As applicable via CA 2007.

4.0 REPORT SUMMARY

Construction emissions from the proposed project will not exceed the CEQA thresholds of significance. Potential dust emissions would be further reduced by implementation of standard dust control measures (water exposed surfaces twice per day) as required for all projects within the MDAB. Therefore, potential impacts from construction activities are determined to be less than significant and no further analysis is required.

The operational emissions from the proposed project would not exceed MDAQMD regional thresholds of significance. No impacts to local or regional air quality are anticipated during project operations. The proposed project as well as all projects within the MDAB will be required to comply with current MDAQMD regulations and dust control measures. Therefore, potential impacts from operational activities are determined to be less than significant and no further analysis is required.

5.0 REFERENCES

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APPENDIX A
CALEEMOD 2011 MODEL OUTPUT

Prescott Retail Center

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Medical Office Building	7.35	1000sqft
Fast Food Restaurant w/o Drive Thru	3	1000sqft
Strip Mall	17.64	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics -

Land Use - Changed acerage to reflect site plan.

Construction Phase -

Vehicle Trips - Trip rates revised to reflect TIA prepared by Urban Crossroads.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2011	0.77	5.14	3.16	0.01	0.09	0.35	0.44	0.04	0.35	0.39	0.00	477.23	477.23	0.06	0.00	478.54
2012	0.38	0.34	0.23	0.00	0.00	0.03	0.03	0.00	0.03	0.03	0.00	29.41	29.41	0.00	0.00	29.50
Total	**1.15**	**5.48**	**3.39**	**0.01**	**0.09**	**0.38**	**0.47**	**0.04**	**0.38**	**0.42**	**0.00**	**506.64**	**506.64**	**0.06**	**0.00**	**508.04**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2011	0.77	5.14	3.16	0.01	0.05	0.35	0.40	0.02	0.35	0.36	0.00	477.23	477.23	0.06	0.00	478.54
2012	0.38	0.34	0.23	0.00	0.00	0.03	0.03	0.00	0.03	0.03	0.00	29.41	29.41	0.00	0.00	29.50
Total	**1.15**	**5.48**	**3.39**	**0.01**	**0.05**	**0.38**	**0.43**	**0.02**	**0.38**	**0.39**	**0.00**	**506.64**	**506.64**	**0.06**	**0.00**	**508.04**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.14	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
Energy	0.00	0.04	0.04	0.00		0.00	0.00		0.00	0.00	0.00	196.98	196.98	0.01	0.00	198.20
Mobile	3.50	18.88	31.92	0.03	2.39	0.64	3.03	0.11	0.64	0.75	0.00	3,178.78	3,178.78	0.20	0.00	3,182.89
Waste						0.00	0.00		0.00	0.00	26.89	0.00	26.89	1.59	0.00	60.26
Water						0.00	0.00		0.00	0.00	0.00	15.27	15.27	0.10	0.00	18.11
Total	**3.64**	**18.92**	**31.96**	**0.03**	**2.39**	**0.64**	**3.03**	**0.11**	**0.64**	**0.75**	**26.89**	**3,391.03**	**3,417.92**	**1.90**	**0.00**	**3,459.46**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.14	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
Energy	0.00	0.04	0.04	0.00		0.00	0.00		0.00	0.00	0.00	196.98	196.98	0.01	0.00	198.20
Mobile	3.50	18.88	31.92	0.03	2.39	0.64	3.03	0.11	0.64	0.75	0.00	3,178.78	3,178.78	0.20	0.00	3,182.89
Waste						0.00	0.00		0.00	0.00	26.89	0.00	26.89	1.59	0.00	60.26
Water						0.00	0.00		0.00	0.00	0.00	15.27	15.27	0.10	0.00	18.11
Total	**3.64**	**18.92**	**31.96**	**0.03**	**2.39**	**0.64**	**3.03**	**0.11**	**0.64**	**0.75**	**26.89**	**3,391.03**	**3,417.92**	**1.90**	**0.00**	**3,459.46**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.05	0.00	0.05	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.22	0.13	0.00		0.01	0.01		0.01	0.01	0.00	18.13	18.13	0.00	0.00	18.18
Total	**0.03**	**0.22**	**0.13**	**0.00**	**0.05**	**0.01**	**0.06**	**0.02**	**0.01**	**0.03**	**0.00**	**18.13**	**18.13**	**0.00**	**0.00**	**18.18**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.2 Site Preparation - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.02	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.22	0.13	0.00		0.01	0.01		0.01	0.01	0.00	18.13	18.13	0.00	0.00	18.18
Total	**0.03**	**0.22**	**0.13**	**0.00**	**0.02**	**0.01**	**0.03**	**0.01**	**0.01**	**0.02**	**0.00**	**18.13**	**18.13**	**0.00**	**0.00**	**18.18**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.3 Grading - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.03	0.00	0.03	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.22	0.13	0.00		0.01	0.01		0.01	0.01	0.00	19.01	19.01	0.00	0.00	19.06
Total	**0.03**	**0.22**	**0.13**	**0.00**	**0.03**	**0.01**	**0.04**	**0.01**	**0.01**	**0.02**	**0.00**	**19.01**	**19.01**	**0.00**	**0.00**	**19.06**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

3.3 Grading - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.22	0.13	0.00		0.01	0.01		0.01	0.01	0.00	19.01	19.01	0.00	0.00	19.06
Total	**0.03**	**0.22**	**0.13**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**	**0.00**	**19.01**	**19.01**	**0.00**	**0.00**	**19.06**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.53	0.00	0.00	0.53
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.53**	**0.53**	**0.00**	**0.00**	**0.53**

3.4 Building Construction - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.69	4.56	2.73	0.00		0.32	0.32		0.32	0.32	0.00	415.93	415.93	0.06	0.00	417.11
Total	**0.69**	**4.56**	**2.73**	**0.00**		**0.32**	**0.32**		**0.32**	**0.32**	**0.00**	**415.93**	**415.93**	**0.06**	**0.00**	**417.11**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	0.12	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	14.17	14.17	0.00	0.00	14.17
Worker	0.01	0.01	0.11	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.06	9.06	0.00	0.00	9.08
Total	**0.02**	**0.13**	**0.16**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**23.23**	**23.23**	**0.00**	**0.00**	**23.25**

3.4 Building Construction - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.69	4.56	2.73	0.00		0.32	0.32		0.32	0.32	0.00	415.93	415.93	0.06	0.00	417.11
Total	**0.69**	**4.56**	**2.73**	**0.00**		**0.32**	**0.32**		**0.32**	**0.32**	**0.00**	**415.93**	**415.93**	**0.06**	**0.00**	**417.11**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	0.12	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	14.17	14.17	0.00	0.00	14.17
Worker	0.01	0.01	0.11	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	9.06	9.06	0.00	0.00	9.08
Total	**0.02**	**0.13**	**0.16**	**0.00**	**0.01**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**23.23**	**23.23**	**0.00**	**0.00**	**23.25**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.50	5.50	0.00	0.00	5.51
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.50**	**5.50**	**0.00**	**0.00**	**5.51**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.19
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.12
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.31**	**0.31**	**0.00**	**0.00**	**0.31**

3.4 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.50	5.50	0.00	0.00	5.51
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.50**	**5.50**	**0.00**	**0.00**	**5.51**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.19
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.00	0.12
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.31**	**0.31**	**0.00**	**0.00**	**0.31**

3.5 Paving - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.04	0.25	0.15	0.00		0.02	0.02		0.02	0.02	0.00	19.60	19.60	0.00	0.00	19.67
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.25**	**0.15**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**19.60**	**19.60**	**0.00**	**0.00**	**19.67**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.5 Paving - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.04	0.25	0.15	0.00		0.02	0.02		0.02	0.02	0.00	19.60	19.60	0.00	0.00	19.67
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.25**	**0.15**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**19.60**	**19.60**	**0.00**	**0.00**	**19.67**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.56
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.56**	**1.56**	**0.00**	**0.00**	**1.56**

3.6 Architectural Coating - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.30	2.30	0.00	0.00	2.30
Total	**0.32**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.30**	**2.30**	**0.00**	**0.00**	**2.30**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.00	0.00	0.16
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.16**	**0.16**	**0.00**	**0.00**	**0.16**

3.6 Architectural Coating - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.30	2.30	0.00	0.00	2.30
Total	**0.32**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.30**	**2.30**	**0.00**	**0.00**	**2.30**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.00	0.00	0.16
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.16**	**0.16**	**0.00**	**0.00**	**0.16**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.50	18.88	31.92	0.03	2.39	0.64	3.03	0.11	0.64	0.75	0.00	3,178.78	3,178.78	0.20	0.00	3,182.89
Unmitigated	3.50	18.88	31.92	0.03	2.39	0.64	3.03	0.11	0.64	0.75	0.00	3,178.78	3,178.78	0.20	0.00	3,182.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	729.48	729.48	729.48	1,176,336	1,176,336
Medical Office Building	217.41	217.41	217.41	425,532	425,532
Strip Mall	1,801.22	1,801.22	1801.22	2,773,939	2,773,939
Total	2,748.11	2,748.11	2,748.11	4,375,807	4,375,807

4.3 Trip Type Information

	Miles			Trip %		
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
Fast Food Restaurant w/o Drive Thru	9.50	7.30	7.30	1.50	79.50	19.00
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00

	Miles			Trip %		
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
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	148.93	148.93	0.01	0.00	149.87
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	148.93	148.93	0.01	0.00	149.87
NaturalGas Mitigated	0.00	0.04	0.04	0.00		0.00	0.00		0.00	0.00	0.00	48.04	48.04	0.00	0.00	48.33
NaturalGas Unmitigated	0.00	0.04	0.04	0.00		0.00	0.00		0.00	0.00	0.00	48.04	48.04	0.00	0.00	48.33
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	832530	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	44.43	44.43	0.00	0.00	44.70
Medical Office Building	26820.2	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.43	1.43	0.00	0.00	1.44
Strip Mall	40929.4	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.18	2.18	0.00	0.00	2.20
Total		**0.00**	**0.04**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**48.04**	**48.04**	**0.00**	**0.00**	**48.34**

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	tons/yr										MT/yr					
Fast Food Restaurant w/o Drive Thru	832530	0.00	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	44.43	44.43	0.00	0.00	44.70
Medical Office Building	26820.2	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.43	1.43	0.00	0.00	1.44
Strip Mall	40929.4	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.18	2.18	0.00	0.00	2.20
Total		**0.00**	**0.04**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**48.04**	**48.04**	**0.00**	**0.00**	**48.34**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	157200					45.72	0.00	0.00	46.01
Medical Office Building	78550.1					22.85	0.00	0.00	22.99
Strip Mall	276274					80.36	0.00	0.00	80.86
Total						**148.93**	**0.00**	**0.00**	**149.86**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	157200					45.72	0.00	0.00	46.01
Medical Office Building	78550.1					22.85	0.00	0.00	22.99
Strip Mall	276274					80.36	0.00	0.00	80.86
Total						**148.93**	**0.00**	**0.00**	**149.86**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.14	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
Unmitigated	0.14	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

<u>**Unmitigated**</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.11					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**0.14**	**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**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.11					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**0.14**	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					15.27	0.10	0.00	18.11
Unmitigated					15.27	0.10	0.00	18.11
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	0.910601 / 0.0581235					3.65	0.03	0.00	4.47
Medical Office Building	0.922282 / 0.175673					4.07	0.03	0.00	4.90
Strip Mall	1.30664 / 0.800843					7.55	0.04	0.00	8.74
Total						**15.27**	**0.10**	**0.00**	**18.11**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	0.910601 / 0.0581235					3.65	0.03	0.00	4.47
Medical Office Building	0.922282 / 0.175673					4.07	0.03	0.00	4.90
Strip Mall	1.30664 / 0.800843					7.55	0.04	0.00	8.74
Total						**15.27**	**0.10**	**0.00**	**18.11**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					26.89	1.59	0.00	60.26
Unmitigated					26.89	1.59	0.00	60.26
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	34.56					7.02	0.41	0.00	15.72
Medical Office Building	79.38					16.11	0.95	0.00	36.11
Strip Mall	18.52					3.76	0.22	0.00	8.43
Total						**26.89**	**1.58**	**0.00**	**60.26**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Fast Food Restaurant w/o Drive Thru	34.56					7.02	0.41	0.00	15.72
Medical Office Building	79.38					16.11	0.95	0.00	36.11
Strip Mall	18.52					3.76	0.22	0.00	8.43
Total						**26.89**	**1.58**	**0.00**	**60.26**

9.0 Vegetation

Prescott Retail Center

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Medical Office Building	7.35	1000sqft
Fast Food Restaurant w/o Drive Thru	3	1000sqft
Strip Mall	17.64	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics -

Land Use - Changed acerage to reflect site plan.

Construction Phase -

Vehicle Trips - Trip rates revised to reflect TIA prepared by Urban Crossroads.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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					
2011	11.13	89.95	52.34	0.07	18.30	4.62	22.92	9.94	4.62	14.56	0.00	8,167.55	0.00	1.00	0.00	8,188.59
2012	36.55	38.45	25.01	0.05	0.26	2.58	2.74	0.01	2.58	2.59	0.00	4,260.14	0.00	0.52	0.00	4,270.96
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2011	11.13	89.95	52.34	0.07	8.36	4.62	12.98	4.48	4.62	9.10	0.00	8,167.55	0.00	1.00	0.00	8,188.59
2012	36.55	38.45	25.01	0.05	0.26	2.58	2.74	0.01	2.58	2.59	0.00	4,260.14	0.00	0.52	0.00	4,270.96
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.78	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.03	0.24	0.20	0.00		0.00	0.02		0.00	0.02		290.18		0.01	0.01	291.94
Mobile	19.90	105.87	176.00	0.15	14.59	3.63	18.22	0.61	3.63	4.24		18,789.69		1.20		18,814.92
Total	**20.71**	**106.11**	**176.20**	**0.15**	**14.59**	**3.63**	**18.24**	**0.61**	**3.63**	**4.26**		**19,079.87**		**1.21**	**0.01**	**19,106.86**

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	0.78	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.03	0.24	0.20	0.00		0.00	0.02		0.00	0.02		290.18		0.01	0.01	291.94
Mobile	19.90	105.87	176.00	0.15	14.59	3.63	18.22	0.61	3.63	4.24		18,789.69		1.20		18,814.92
Total	**20.71**	**106.11**	**176.20**	**0.15**	**14.59**	**3.63**	**18.24**	**0.61**	**3.63**	**4.26**		**19,079.87**		**1.21**	**0.01**	**19,106.86**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2011

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					18.07	0.00	18.07	9.93	0.00	9.93						0.00
Off-Road	10.99	89.73	50.45	0.07		4.61	4.61		4.61	4.61		7,997.70		0.99		8,018.42
Total	**10.99**	**89.73**	**50.45**	**0.07**	**18.07**	**4.61**	**22.68**	**9.93**	**4.61**	**14.54**		**7,997.70**		**0.99**		**8,018.42**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.22	1.89	0.00	0.23	0.01	0.24	0.01	0.01	0.02		169.85		0.02		170.17
Total	**0.14**	**0.22**	**1.89**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**169.85**		**0.02**		**170.17**

3.2 Site Preparation - 2011

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					8.13	0.00	8.13	4.47	0.00	4.47						0.00
Off-Road	10.99	89.73	50.45	0.07		4.61	4.61		4.61	4.61	0.00	7,997.70		0.99		8,018.42
Total	**10.99**	**89.73**	**50.45**	**0.07**	**8.13**	**4.61**	**12.74**	**4.47**	**4.61**	**9.08**	**0.00**	**7,997.70**		**0.99**		**8,018.42**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.22	1.89	0.00	0.23	0.01	0.24	0.01	0.01	0.02		169.85		0.02		170.17
Total	**0.14**	**0.22**	**1.89**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**169.85**		**0.02**		**170.17**

3.3 Grading - 2011

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.55	0.00	6.55	3.31	0.00	3.31						0.00
Off-Road	7.18	55.38	32.83	0.05		3.27	3.27		3.27	3.27		5,240.07		0.64		5,253.60
Total	**7.18**	**55.38**	**32.83**	**0.05**	**6.55**	**3.27**	**9.82**	**3.31**	**3.27**	**6.58**		**5,240.07**		**0.64**		**5,253.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.18	1.57	0.00	0.20	0.01	0.20	0.01	0.01	0.02		141.54		0.01		141.81
Total	**0.12**	**0.18**	**1.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.02**		**141.54**		**0.01**		**141.81**

3.3 Grading - 2011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.95	0.00	2.95	1.49	0.00	1.49						0.00
Off-Road	7.18	55.38	32.83	0.05		3.27	3.27		3.27	3.27	0.00	5,240.07		0.64		5,253.60
Total	**7.18**	**55.38**	**32.83**	**0.05**	**2.95**	**3.27**	**6.22**	**1.49**	**3.27**	**4.76**	**0.00**	**5,240.07**		**0.64**		**5,253.60**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.12	0.18	1.57	0.00	0.20	0.01	0.20	0.01	0.01	0.02		141.54		0.01		141.81
Total	**0.12**	**0.18**	**1.57**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.02**		**141.54**		**0.01**		**141.81**

3.4 Building Construction - 2011

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	6.11	40.22	24.03	0.04		2.80	2.80		2.80	2.80		4,040.62		0.55		4,052.11
Total	**6.11**	**40.22**	**24.03**	**0.04**		**2.80**	**2.80**		**2.80**	**2.80**		**4,040.62**		**0.55**		**4,052.11**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.08	1.08	0.46	0.00	0.05	0.04	0.08	0.00	0.04	0.04		136.69		0.00		136.77
Worker	0.07	0.11	0.94	0.00	0.12	0.00	0.12	0.00	0.00	0.01		84.92		0.01		85.08
Total	**0.15**	**1.19**	**1.40**	**0.00**	**0.17**	**0.04**	**0.20**	**0.00**	**0.04**	**0.05**		**221.61**		**0.01**		**221.85**

3.4 Building Construction - 2011

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	6.11	40.22	24.03	0.04		2.80	2.80		2.80	2.80	0.00	4,040.62		0.55		4,052.11
Total	**6.11**	**40.22**	**24.03**	**0.04**		**2.80**	**2.80**		**2.80**	**2.80**	**0.00**	**4,040.62**		**0.55**		**4,052.11**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.08	1.08	0.46	0.00	0.05	0.04	0.08	0.00	0.04	0.04		136.69		0.00		136.77
Worker	0.07	0.11	0.94	0.00	0.12	0.00	0.12	0.00	0.00	0.01		84.92		0.01		85.08
Total	**0.15**	**1.19**	**1.40**	**0.00**	**0.17**	**0.04**	**0.20**	**0.00**	**0.04**	**0.05**		**221.61**		**0.01**		**221.85**

3.4 Building Construction - 2012

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	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54		4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**		**4,040.62**		**0.51**		**4,051.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.98	0.43	0.00	0.05	0.03	0.08	0.00	0.03	0.04		136.55		0.00		136.62
Worker	0.06	0.10	0.85	0.00	0.12	0.00	0.12	0.00	0.00	0.01		82.97		0.01		83.12
Total	**0.13**	**1.08**	**1.28**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.05**		**219.52**		**0.01**		**219.74**

3.4 Building Construction - 2012

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	5.63	37.37	23.73	0.04		2.54	2.54		2.54	2.54	0.00	4,040.62		0.51		4,051.23
Total	**5.63**	**37.37**	**23.73**	**0.04**		**2.54**	**2.54**		**2.54**	**2.54**	**0.00**	**4,040.62**		**0.51**		**4,051.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.98	0.43	0.00	0.05	0.03	0.08	0.00	0.03	0.04		136.55		0.00		136.62
Worker	0.06	0.10	0.85	0.00	0.12	0.00	0.12	0.00	0.00	0.01		82.97		0.01		83.12
Total	**0.13**	**1.08**	**1.28**	**0.00**	**0.17**	**0.03**	**0.20**	**0.00**	**0.03**	**0.05**		**219.52**		**0.01**		**219.74**

3.5 Paving - 2012

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	4.51	27.70	17.08	0.03		2.41	2.41		2.41	2.41		2,400.73		0.40		2,409.23
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**4.51**	**27.70**	**17.08**	**0.03**		**2.41**	**2.41**		**2.41**	**2.41**		**2,400.73**		**0.40**		**2,409.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.22	1.88	0.00	0.26	0.01	0.27	0.01	0.01	0.02		184.38		0.02		184.71
Total	**0.14**	**0.22**	**1.88**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**184.38**		**0.02**		**184.71**

3.5 Paving - 2012

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	4.51	27.70	17.08	0.03		2.41	2.41		2.41	2.41	0.00	2,400.73		0.40		2,409.23
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**4.51**	**27.70**	**17.08**	**0.03**		**2.41**	**2.41**		**2.41**	**2.41**	**0.00**	**2,400.73**		**0.40**		**2,409.23**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.14	0.22	1.88	0.00	0.26	0.01	0.27	0.01	0.01	0.02		184.38		0.02		184.71
Total	**0.14**	**0.22**	**1.88**	**0.00**	**0.26**	**0.01**	**0.27**	**0.01**	**0.01**	**0.02**		**184.38**		**0.02**		**184.71**

3.6 Architectural Coating - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.01					0.00	0.00		0.00	0.00						0.00
Off-Road	0.52	3.16	1.96	0.00		0.29	0.29		0.29	0.29		281.19		0.05		282.18
Total	**36.53**	**3.16**	**1.96**	**0.00**		**0.29**	**0.29**		**0.29**	**0.29**		**281.19**		**0.05**		**282.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.01	0.02	0.19	0.00	0.03	0.00	0.03	0.00	0.00	0.00		18.44		0.00		18.47
Total	**0.01**	**0.02**	**0.19**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**		**18.44**		**0.00**		**18.47**

3.6 Architectural Coating - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	36.01					0.00	0.00		0.00	0.00						0.00
Off-Road	0.52	3.16	1.96	0.00		0.29	0.29		0.29	0.29	0.00	281.19		0.05		282.18
Total	**36.53**	**3.16**	**1.96**	**0.00**		**0.29**	**0.29**		**0.29**	**0.29**	**0.00**	**281.19**		**0.05**		**282.18**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.01	0.02	0.19	0.00	0.03	0.00	0.03	0.00	0.00	0.00		18.44		0.00		18.47
Total	**0.01**	**0.02**	**0.19**	**0.00**	**0.03**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**		**18.44**		**0.00**		**18.47**

4.0 Mobile Detail

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	19.90	105.87	176.00	0.15	14.59	3.63	18.22	0.61	3.63	4.24		18,789.69		1.20		18,814.92
Unmitigated	19.90	105.87	176.00	0.15	14.59	3.63	18.22	0.61	3.63	4.24		18,789.69		1.20		18,814.92
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant w/o Drive Thru	729.48	729.48	729.48	1,176,336	1,176,336
Medical Office Building	217.41	217.41	217.41	425,532	425,532
Strip Mall	1,801.22	1,801.22	1801.22	2,773,939	2,773,939
Total	2,748.11	2,748.11	2,748.11	4,375,807	4,375,807

4.3 Trip Type Information

	Miles			Trip %		
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
Fast Food Restaurant w/o Drive Thru	9.50	7.30	7.30	1.50	79.50	19.00
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00

	Miles			Trip %		
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
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00

5.0 Energy Detail

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	0.03	0.24	0.20	0.00		0.00	0.02		0.00	0.02		290.18		0.01	0.01	291.94
NaturalGas Unmitigated	0.03	0.24	0.20	0.00		0.00	0.02		0.00	0.02		290.18		0.01	0.01	291.94
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2280.9	0.02	0.22	0.19	0.00		0.00	0.02		0.00	0.02		268.34		0.01	0.00	269.97
Medical Office Building	73.48	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.64		0.00	0.00	8.70
Strip Mall	112.135	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		13.19		0.00	0.00	13.27
Total		**0.02**	**0.24**	**0.21**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**290.17**		**0.01**	**0.00**	**291.94**

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	lb/day										lb/day					
Fast Food Restaurant w/o Drive Thru	2.2809	0.02	0.22	0.19	0.00		0.00	0.02		0.00	0.02		268.34		0.01	0.00	269.97
Medical Office Building	0.07348	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.64		0.00	0.00	8.70
Strip Mall	0.112135	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		13.19		0.00	0.00	13.27
Total		**0.02**	**0.24**	**0.21**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**290.17**		**0.01**	**0.00**	**291.94**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.78	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.78	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.18					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.60					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.78**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.18					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.60					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.78**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation