Air Quality Analysis for the Centerpointe 78 Project, City of Escondido, California

Prepared for

City of Escondido
Planning Department
201 N. Broadway
Escondido, CA 92025
Contact: Mr. Jay Petrek

Prepared by

RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334
RECON Number 7374

June 8, 2015

Jessica Fleming Air/Noise/GHG Analyst

THIS PAGE IS INTENTIONALLY BLANK.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

FIGURES

TABLES

ATTACHMENTS

Executive Summary

This report evaluates potential local and regional air quality impacts associated with the Centerpointe 78 project (project) located in the city of Escondido (City). The project site is developed with a 30,000-square-foot auto dealership, which is currently vacant. The project proposes to redevelop the site into a market and a restaurant with associated parking, access, and utility improvements.

The primary goal of the San Diego Air Pollution Control District's Regional Air Quality Strategy (RAQS) is to reduce ozone precursor emissions. Because the project would be consistent with the General Plan land use designation, the project would be consistent with the growth anticipated by the General Plan and the Sam Diego Association of Governments. The proposed project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Additionally, construction and operational emissions would be less than the City's thresholds for all criteria pollutants. Thus, the project would not interfere with implementation of the RAQS or other air quality plans. Impacts would be less than significant.

With regard to criteria pollutants, construction, and operational emissions would be less than the City's significance thresholds for all criteria pollutants. Impacts would be less than significant and no mitigation is required.

There would be no harmful concentrations of carbon monoxide, and localized air quality emission would not exceed applicable standards with implementation of the project; therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

The project does not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, odor impacts would be less than significant.

1.0 Introduction and Project Description

The purpose of this report is to assess potential short-term local and regional air quality impacts resulting from development of the project.

Air pollution affects all southern Californians. Effects can include the following:

- Increased respiratory infections
- Increased discomfort
- Missed days from work and school
- Increased mortality

Polluted air also damages agriculture and our natural environment.

The project is located within the San Diego Air Basin (SDAB), one of 15 air basins that geographically divide the state of California. The SDAB is currently classified as a federal non-attainment area for ozone, and a state non-attainment area for ozone, particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and ozone.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short-term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot-spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts are primarily to the basin due to emissions from mobile sources associated with vehicular travel along the roadways within the project area.

The analysis of impacts is based on state and federal Ambient Air Quality Standards (AAQS) and is assessed in accordance with the guidelines, policies, and standards established by the City and the San Diego Air Pollution Control District (SDAPCD). Project compatibility with the adopted air quality plan for the area is also assessed. Measures are recommended, as required, to reduce potentially significant impacts.

1.1 Project Description

The Centerpointe 78 project (hereafter “project”) is located at 925 North Broadway in the city of Escondido, California. The 3.7-acre site is bounded by Lincoln Avenue to the north, Broadway to the east, Highway 78 to the south, and residences to the west. The project site is currently developed with an approximate 30,000-square-foot auto

dealership, which is currently vacant. The project proposes to redevelop the site into a market and a restaurant with associated parking, access, and utility improvements.

Figure 1 shows the regional location of the project. Figure 2 shows an aerial photograph of the project and vicinity. Figure 3 shows the proposed site plan.

The proposed market uses would consist of a specialty local grocery store. The approximately 43,500-square-foot market building would be located in the western portion of the site. The back area of the building would include a loading dock area with two large rollup doors. The market would utilize a trash compactor, cardboard bailer, and recycling as per the local solid waste hauler.

The 3,200-square-foot restaurant pad would be located in the eastern portion of the site. No building plans are proposed for the restaurant at this time. The proposed quick-service restaurant (e.g., taco shop or coffee shop) would include a one-way, 12-foot-wide drive-through wrapping around the southern and eastern side of the pad. The project would provide 199 parking spaces.

2.0 Regulatory Framework

Motor vehicles are San Diego County's leading source of air pollution (County of San Diego 2008). In addition to these sources, other mobile sources include construction equipment, trains, and airplanes. Emission standards for mobile sources are established by state and federal agencies, such as the California Air Resources Board (CARB) and the United States Environmental Protection Agency (U.S. EPA). Reducing mobile source emissions requires the technological improvement of existing mobile sources and the examination of future mobile sources, such as those associated with new or modification projects (e.g., retrofitting older vehicles with cleaner emission technologies). The state of California has developed statewide programs to encourage cleaner cars and cleaner fuels. Since 1996, smog-forming emissions from motor vehicles have been reduced by 15 percent, and the cancer risk from exposure to motor vehicle air toxics has been reduced by 40 percent (County of San Diego 2008). The regulatory framework described below details the federal and state agencies that are in charge of monitoring and controlling mobile source air pollutants and the measures currently being taken to achieve and maintain healthful air quality in the SDAB.

In addition to mobile sources, stationary sources also contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources of air pollution are regulated by the local air pollution control or management district, in this case the SDAPCD.

Project Location

FIGURE 1

Regional Location

RECON

M:\JOBS4\7374\common_gis\fig1_Air.mxd 5/12/2015 fmm

Image Source: SanGIS (flown May 2012)

0 Feet 250

Project Boundary

RECON

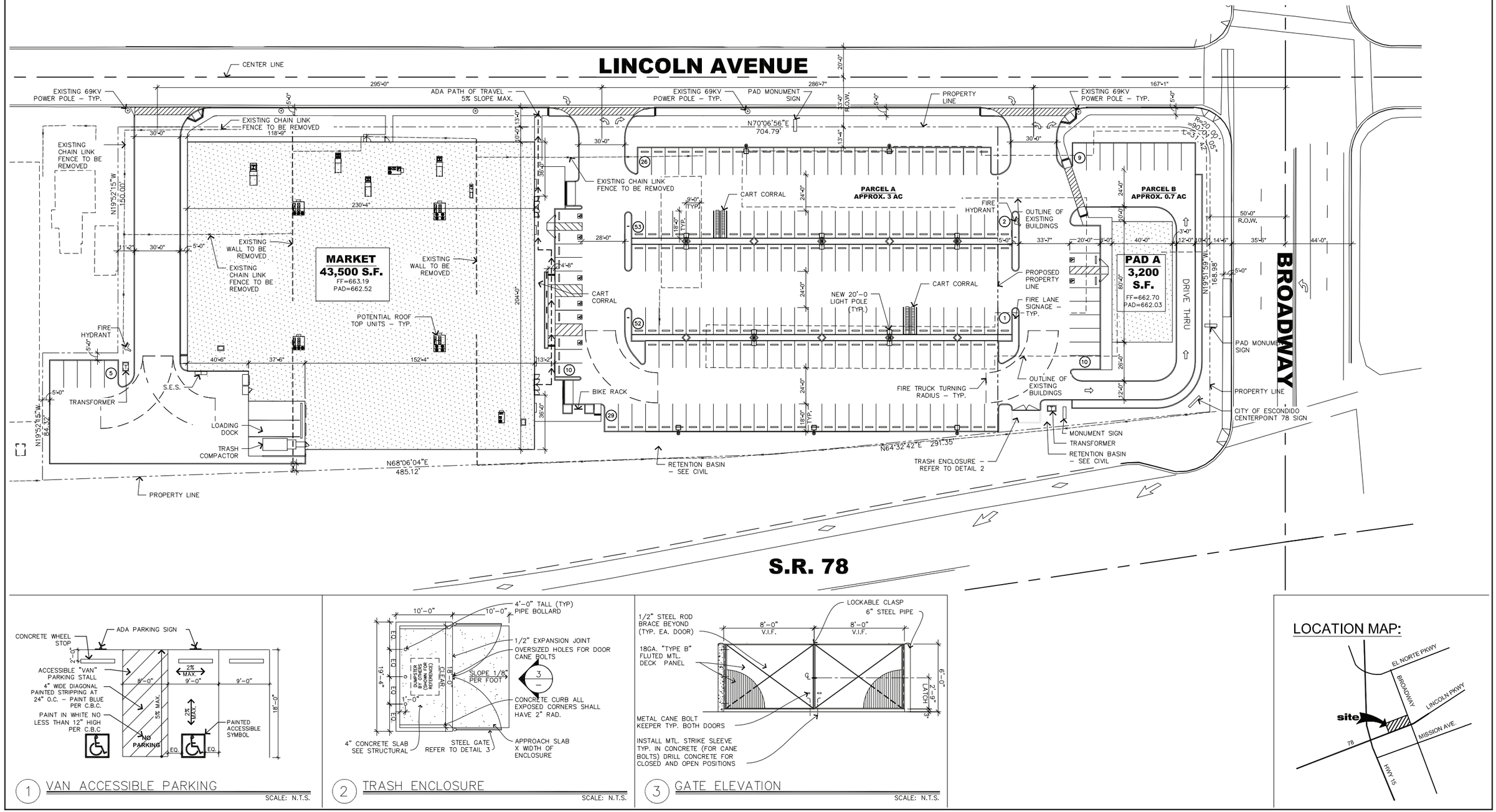
M:\JOBS4\7374\common_gis\fig2_Air.mxd 5/12/2015 fmm

FIGURE 2

Aerial Photograph

THIS PAGE IS INTENTIONALLY BLANK.

Map Source: RKAA Architects



1 VAN ACCESSIBLE PARKING

SCALE: N.T.S.

2 TRASH ENCLOSURE

SCALE: N.T.S.

3 GATE ELEVATION

SCALE: N.T.S.

0 Feet 60

RECON

M:\JOBS4\7374\env\graphics\Air_GHG\fig3.ai 05/12/15

FIGURE 3
Site Plan

THIS PAGE IS INTENTIONALLY BLANK.

The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as a moderate, serious, severe, or extreme non-attainment area for that pollutant (there is also a marginal classification for federal non-attainment areas). Once a non-attainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal Clean Air Act (CAA). Areas that are redesignated to attainment are called maintenance areas.

The City of Escondido Municipal Code (Escondido Municipal Code Section 33-924(G)) also includes emission limits for projects proposed within its jurisdiction. These thresholds are identified in Section 2.4 below.

2.1 Federal Regulations

2.1.1 National Ambient Air Quality Standards

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The CAA was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 USC 7409], the U.S. EPA developed primary and secondary national ambient air quality standards (NAAQS).

Six criteria pollutants of primary concern have been designated: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and respirable particulate matter (PM_{10} and $PM_{2.5}$). The primary NAAQS ". . . in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . . " and the secondary standards ". . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). California and national AAQS are presented in Table 1 (State of California 2013).

TABLE 1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})[8]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[8]	24 Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m^3)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[9]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Fluorescence; Spectro photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[10]	–	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chroma-tography			

See footnotes on next page.

TABLE 1
AMBIENT AIR QUALITY STANDARDS
(continued)

ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; – = not applicable.

[1]California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4]Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

[5]National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6]National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7]Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

[8]On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standards of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[9]To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (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 standard of 100 ppb is identical to 0.100 ppm.

[10]On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[11]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.

[12]The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[13]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.

2.2 State Regulations

2.2.1 California Ambient Air Quality Standards

The U.S. EPA allows states the option to develop different (stricter) standards. The state of California has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the criteria pollutants (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 1). Similar to the federal CAA, the state classifies specific geographic areas as either “attainment” or “nonattainment” areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM_{10} standard, and the state $PM_{2.5}$ standard.

2.2.2 Toxic Air Contaminants

The public’s exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel-exhaust particulate matter emissions have been established as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD’s Regulation XII. Of particular concern statewide are diesel-exhaust particulate matter emissions.

Diesel-exhaust particulate matter was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of diesel particulate matter as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (State of California 2000). A stated goal of the plan is to reduce the cancer risk statewide arising from exposure to diesel particulate matter 85 percent by 2020.

In April 2005, CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (State of California 2005a). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of diesel-particulate and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public’s exposure to diesel particulate matter will continue to decline.

2.2.3 State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state’s strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB

then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SDAPCD adopts rules, regulations, and programs to attain State and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives.

2.2.4 California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

2.3 Regional Regulations

The SDAPCD is the agency that regulates air quality in the SDAB. The SDAPCD prepared the RAQS in response to the requirements set forth in the CAA AB 2595 (County of San Diego 1992). Attached, as part of the RAQS, are the Transportation Control Measures (TCMs) for the air quality plan prepared by the San Diego Association of Governments (SANDAG) in accordance with AB 2595 and adopted by SANDAG on March 27, 1992, as Resolution Number 92-49 and Addendum. The RAQS and TCM set forth the steps needed to accomplish attainment of state AAQS. The required triennial updates of the RAQS and corresponding TCM were adopted in 1995, 1998, 2001, 2004, and 2009.

The SDAPCD has also established a set of rules and regulations initially adopted on January 1, 1969, and periodically reviewed and updated. These rules and regulations are available for review on the agency's website.

2.4 Local Regulations

The Escondido Municipal Code, Section 33-924(G), includes coordination of CEQA, quality of life standards, and growth management provisions. The purpose of Section 33-924(G) is to ensure consistency between the City's thresholds of environmental significance and the Public Facilities Master Plans which implements the growth management element of the General Plan. The City's General Plan contains quality of life standards that are to be considered in comprehensive planning efforts as well as individual project review. Section 33-924(G)(6) includes thresholds for volatile organic

compounds (VOCs)[1], oxides of nitrogen (NO_x), CO, sulfur oxides (SO_x), PM_{10}, $PM_{2.5}$, and lead. These thresholds are summarized in Table 2.

TABLE 2
CITY OF ESCONDIDO AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Emission Rate (lb/day)
VOC	75[1]/55[2]
NO_x	250
CO	550
SO_x	250
PM_{10}	100
$PM_{2.5}$	55
Lead	3.2[3]

SOURCE: Escondido Municipal Code Section 33-924(G)
[1]Threshold for construction per SCAQMD CEQA Air Quality Handbook
[2]Threshold for operation per SCAQMD CEQA Air Quality Handbook
[3]Not applicable to construction

3.0 Environmental Setting

3.1 Geographic Setting

The project is located in the city of Escondido, about 13 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below.

3.2 Climate

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The mean annual temperature for the project area is 62 degrees Fahrenheit (°F). The average annual precipitation is 16 inches, falling primarily from November to April. Winter low temperatures in the project area average about 32°F, and summer high temperatures average about 86°F. The average relative humidity is 69 percent and is based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center 2014).

1 Note that reactive organic gases and VOC are interchangeable in the context of this project analysis.

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone interacting with the daily local cycle produce periodic temperature inversions that influence the dispersal or containment of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths, the greater the ability of the atmosphere to disperse pollutants.

Throughout the year, the height of the temperature inversion in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level. In winter, the morning inversion layer is about 800 feet above mean sea level. In summer, the morning inversion layer is about 1,100 feet above mean sea level. Therefore, air quality generally tends to be better in the winter than in the summer.

The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Anas tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the basin.

3.3 Existing Air Quality

The project area is within the SDAB. Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the EPA. The SDAPCD maintains 11 air-quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels. Table 3 summarizes the number of days per year during which state and federal standards were exceeded in the SDAB overall during the years 2009 to 2013.

The Escondido—East Valley Parkway monitoring station, located 2.5 miles north of the project site, is the nearest station to the project area (see Figure 2). The Escondido—East Valley Parkway monitoring station measures ozone, CO, NO_2, PM_{10}, and $PM_{2.5}$. Table 4 provides a summary of measurements of ozone, CO, NO_2, PM_{10}, and $PM_{2.5}$ collected at the Escondido—East Valley Parkway monitoring station for the years 2009 through 2013.

3.3.1 Ozone

Nitrogen oxides and hydrocarbons (reactive organic gases [ROGs]) are known as the chief “precursors” of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution, or smog, is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past 20 years, San Diego had experienced a decline in the number of days with unhealthy levels of ozone despite the region’s growth in population and vehicle miles traveled (County of San Diego 2009).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB’s ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

TABLE 3
AMBIENT AIR QUALITY SUMMARY – SAN DIEGO AIR BASIN

Pollutant	Average Time	California Ambient Air Quality Standards[a]	Attainment Status	National Ambient Air Quality Standards[b]	Attainment Status[c]	Maximum Concentration					Number of Days Exceeding State Standard					Number of Days Exceeding National Standard				
						2009	2010	2011	2012	2013	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
O_3	1 hour	0.09 ppm	N	N/A	N/A	0.119	0.107	0.114	0.101	0.095	8	7	5	2	2	N/A	N/A	N/A	N/A	N/A
O_3	8 hours	0.07ppm	N	0.075 ppm	N	0.098	0.088	0.093	0.084	0.083	47	21	33	25	28	24	14	10	10	7
CO	8 hours	9 ppm	A	9 ppm	A	3.24	2.46	2.44	3.61	Na	0	0	0	0	Na	0	0	0	0	Na
NO_2	1 hour	0.18 ppm	A	0.100 ppm	A	0.091	0.091	0.100	0.077	0.091	0	0	0	0	0	0	0	0	0	0
NO_2	Annual	0.030 ppm	A	0.053 ppm	A	0.021	0.021	0.020	0.020	0.019	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX
PM_{10}	24 hours	50 $\mu g/m^3$	N	150 $\mu g/m^3$	U	123.0	108.0	126.0	126.0	92.0	25/ 146.4*	22/ 136.0*	23/ 138.5*	6/6.1*	1/6.0*	0/0.0*	0/0.0*	0/0.0*	0/0.0*	0/0.0*
PM_{10}	Annual	20 $\mu g/m^3$	N	N/A	N/A	53.9	47.0	46.2	24.3	25.4	EX	EX	EX	EX	EX	--	--	--	--	--
$PM_{2.5}$	24 hours	N/A	N/A	35 $\mu g/m^3$	A	78.4	52.2	72.0	82.9	68.1	--	--	--	--	--	4/3.4*	2/2.0*	3/3.0*	2/1.0*	3/2.0*
$PM_{2.5}$	Annual	12 $\mu g/m^3$	N	15 $\mu g/m^3$	A	12.2	10.8	15.9	14.2	10.6	EX	NX	EX	EX	NX	NX	NX	EX	NX	NX

SOURCE: State of California 2014. California Air Quality Data Statistics. California Air Resources Board Internet Site. URL http://www.arb.ca.gov/adam/welcome.html.

NOTE: Data for SO_2 and 1-hour CO were not available.

*Measured Days/Calculated Days - Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year. Data to determine federal calculated days were not available.

[a]California standards for ozone, carbon monoxide (except at Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM_{10} are values that are not to be exceeded. Some measurements gathered for pollutants with air quality standards that are based upon 1-hour, 8-hour, or 24-hour averages, may be excluded if the CARB determines they would occur less than once per year on average.

[b]National standards other than for ozone and particulates, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.

[c]A = attainment; N = non-attainment; U = Unclassifiable; N/A = not applicable; Na = data not available; NX = annual average not exceeded; EX = annual average exceeded. ppm = parts per million, $\mu g/m^3$ = micrograms per cubic meter.

TABLE 4
SUMMARY OF AIR QUALITY MEASUREMENTS RECORDED AT THE ESCONDIDO – EAST VALLEY PARKWAY MONITORING STATION

Pollutant/Standard	2009	2010	2011	2012	2013
Ozone					
Days State 1-hour Standard Exceeded (0.09 ppm)	0	2	1	0	0
Days State 8-hour Standard Exceeded (0.07 ppm)	9	5	2	2	4
Days National 8-hour Standard Exceeded (0.075 ppm)	1	3	2	0	0
Max. 1-hr (ppm)	0.093	0.105	0.098	0.084	0.084
Max 8-hr (ppm)	0.080	0.084	0.089	0.073	0.074
Carbon Monoxide					
Days State 1-hour Standard Exceeded (20 ppm)	0	0	0	0	0
Days State 8-hour Standard Exceeded (9 ppm)	0	0	0	0	0
Days National 1-hour Standard Exceeded (35 ppm)	0	0	0	0	0
Days National 8-hour Standard Exceeded (9 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	4.4	3.9	3.5	4.4	3.2
Max. 8-hr (ppm)	3.24	2.46	2.20	3.61	Na
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Max 1-hr (ppm)	73	64	62	62	61
Annual Average (ppm)	16	14	Na	13	13
PM_{10}*					
Measured Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	1	0	0	0	1
Calculated Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	5.6	0	0	0	6
Measured Days National 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	0	0
Calculated Days National 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	0	0
Max. Daily ($\mu g/m^3$)	74	43	40	33	82
State Annual Average ($\mu g/m^3$)	24.6	21	18.8	18.1	23.1
National Annual Average ($\mu g/m^3$)	24.9	20.9	18.8	18	23.2
$PM_{2.5}$*					
Measured Days National 24-hour Standard Exceeded (35 $\mu g/m^3$)	1	0	0	1	1
Calculated Days National 24-hour Standard Exceeded (35 $\mu g/m^3$)	3.0	0	0	3.1	3.1
Max. Daily ($\mu g/m^3$)	78.4	52.2	27.4	70.7	56.3
State Annual Average ($\mu g/m^3$)	Na	Na	Na	Na	10.5
National Annual Average ($\mu g/m^3$)	11	10.5	10.4	10.5	10.5

SOURCE: State of California 2014a
Na = Not available.
*Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national 1-hour ozone standard and replaced it with the more protective 8-hour ozone standard. The SDAB is currently a nonattainment area for the previous (1997) national 8-hour standard, and is recommended as a nonattainment area for the revised (2008) national 8-hour standard of 0.075 parts per million (ppm).

In the SDAB overall, during the five-year period of 2009 to 2013, the revised 2008 national 8-hour standard of 0.075 was exceeded 24 days in 2009, 14 days in 2010, 10 days in 2011, 10 days in 2012, and 7 days in 2013. The stricter state 8-hour ozone standard of 0.07 ppm was exceeded 47 days in 2009, 21 days in 2010, 33 days in 2011, 25 days in 2012, and 28 days in 2013.

Also during the five-year period of 2009 to 2013, the state 1-hour standard (0.09 ppm) was exceeded 8 days in 2009, 7 days in 2010, 5 days in 2011, 2 days in 2012, and 2 days in 2013.

At the Escondido—East Valley Parkway monitoring station, the state 1-hour ozone standard (0.09 ppm) was exceeded 2 days in 2010 and 1 days in 2011, the national 8-hour ozone standard (0.075 ppm) was exceed 1 day in 2009, 3 days in 2010, and 2 days in 2011, and the stricter state 8-hour ozone standard (0.07 ppm) was exceeded 9 days in 2009, 5 days in 2010, 2 days in 2011, 2 days in 2012, and 4 days in 2013 during the five year period of 2009 through 2013.

Not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emission sources to produce elevated ozone levels in the SDAB.

Local agencies can control neither the source nor the transportation of pollutants from outside the air basin. The SDAPCD's policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the SDAPCD has effectively reduced ozone levels in the SDAB.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **TCMs if vehicle travel and emissions exceed attainment demonstration levels.** TCMs are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog check program is overseen by the Bureau of Automotive Repair. The program requires most vehicles to pass a smog test once every two years before registering in the state of California. The smog check program monitors the

amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters," or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

- **Air Quality Improvement Program.** This program, established by AB 118, is a voluntary incentive program administered by the CARB to fund clean vehicle and equipment projects, research on biofuels production and the air quality impacts of alternative fuels, and workforce training.

3.3.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO (County of San Diego 1998). Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003. As shown in Tables 3 and 4, of the available data, the state and national standards have not been exceeded at the Escondido—East Valley Parkway monitoring station or the SDAB during the five-year period from 2009 to 2013.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

3.3.3 PM_{10}

PM_{10} is particulate matter with an aerodynamic diameter of 10 microns or less. Ten microns is about one-seventh of the diameter of a human hair. Particulate matter is a complex mixture of very tiny solid or liquid particles composed of chemicals, soot, and dust. Sources of PM_{10} emissions in the SDAB consist mainly of urban activities, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

Under typical conditions (i.e., no wildfires) particles classified under the PM_{10} category are mainly emitted directly from activities that disturb the soil including travel on roads and construction, mining, or agricultural operations. Other sources include windblown

dust, salts, brake dust, and tire wear (County of San Diego 1998). For several reasons hinging on the area's dry climate and coastal location, the SDAB has special difficulty in developing adequate tactics to meet present state particulate standards.

The SDAB is designated as federal unclassified and state nonattainment for PM_{10}. The measured federal PM_{10} standard was exceeded once in 2007, and once in 2008 in the SDAB. The 2007 exceedance occurred on October 21, 2007, at times when major wildfires were raging throughout the county. Consequently, this exceedance was likely caused by the wildfires and would be beyond the control of the SDAPCD. As such, this event is covered under the EPA's Natural Events Policy that permits, under certain circumstances, the exclusion of air quality data attributable to uncontrollable natural events (e.g., volcanic activity, wild land fires, and high wind events). The 2008 exceedance did not occur during wildfires and are not covered under this policy. No exceedances of the federal standard have occurred since 2008. The stricter state standard was exceeded a calculated number of 146.4 days in 2009, 136.0 in 2010, 138.5 in 2011, 6.1 in 2012, and 6.0 in 2013. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. Particulate measurements are collected every six days.

At the Escondido—East Valley Parkway monitoring station, the national 24-hour PM_{10} standard was not exceeded during the years 2009 through 2013. The stricter state 24-hour PM_{10} standard was exceeded 1 day in 2009 and 1 day in 2013. These exceedances result in a calculated number of days that the state standard was exceeded of approximately 5.6 days in 2009 and 6.0 days in 2013.

3.3.4 $PM_{2.5}$

Airborne, inhalable particles with aerodynamic diameters of 2.5 microns or less have been recognized as an air quality concern requiring regular monitoring. Federal regulations required that $PM_{2.5}$ monitoring begin January 1, 1999 (County of San Diego 1999). The Escondido—East Valley Parkway monitoring station is one of five stations in the SDAB that monitors $PM_{2.5}$. Federal $PM_{2.5}$ standards established in 1997 include an annual arithmetic mean of 15 micrograms per cubic meter of air ($\mu g/m^3$) and a 24-hour concentration of 65 $\mu g/m^3$. As discussed above, the 24-hour $PM_{2.5}$ standard has been changed to 35 $\mu g/m^3$. However, this does not apply to the monitoring from 2004 to 2006. State $PM_{2.5}$ standards established in 2002 are an annual arithmetic mean of 12 $\mu g/m^3$.

The SDAB was classified as an attainment area for the previous federal 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$ and has also been classified as an attainment area for the revised federal 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$ (U.S. EPA 2004, 2009). The SDAB is a non-attainment area for the state $PM_{2.5}$ standard (State of California 2005b). The calculated

days the federal $PM_{2.5}$ standard was exceeded was 3.4 days in 2009, 2.0 days in 2010, 3.0 days in 2011, 1.0 days in 2012, and 2.0 days in 2013 in the SDAB.

Table 4 shows that the federal 24-hour standard of 35 $\mu g/m^3$ was exceeded one day in 2009, one day in 2012, and one day in 2013. These exceedances result in a calculated number of days that the federal standard was exceeded of approximately 3.0 days in 2009, 3.1 days in 2012, and 3.1 days in 2013.

3.3.5 Other Criteria Pollutants

The national and state standards for NO_2, SO_x, and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. As discussed above, new standards for these pollutants have been adopted, and new designations for the SDAB will be determined in the future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility reducing particulates.

4.0 Thresholds of Significance

4.1 City of Escondido

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the CEQA Guidelines Appendix G, SDAPCD regulations, and the City of Escondido Municipal Code. The project would have a significant air quality impact if it would:

1. Obstruct or conflict with the implementation of the RAQS or applicable portions of the SIP.
2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including the release of emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates.
5. Create objectionable odors affecting a substantial number of people.

Emissions resulting from implementation of the project would be due to construction and operation of the project. As discussed in Section 2.4, the City of Escondido Municipal Code Section 33-924(G)(6) includes thresholds for VOCs, NO_x, CO, SO_x, PM_{10}, $PM_{2.5}$, and lead. These thresholds are summarized in Table 2 above.

4.2 CO Hot Spots

In addition to a comparison with the thresholds, the project was evaluated to determine whether it has the potential to produce CO hot spots at intersections near the project site. A hot spot is a localized area, most often near a congested intersection, where the 1-hour or 8-hour CO standards are exceeded. Localized CO impacts can occur where projects contribute traffic to intersections in areas where the ambient CO concentrations are projected to be near or above state or federal standards. However, hot spots almost exclusively occur near signalized intersections with level of service (LOS) E or worse. Per the traffic report prepared for the project (RK Engineering Group 2014), the following intersections would operate at LOS E or F at the project horizon year (2035):

- Centre City Parkway and El Norte Parkway
- Centre City Parkway and Mission Avenue
- North Broadway and State Route (SR) 78/Lincoln Parkway
- North Broadway and Mission Avenue
- Fig Street and Lincoln Parkway

4.3 Public Nuisance Law (Odors)

The State of California Health and Safety Code Sections 41700 and 41705, and SDAPCD Rule 51, commonly referred to as the public nuisance law, prohibit emissions from any source whatsoever in such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Odor complaints from a “considerable” number of persons or businesses in the area will be considered to be a significant, adverse odor impact.

Every use and operation shall be conducted so that no unreasonable heat, odor, vapor, glare, vibration (displacement), dust, smoke, or other forms of air pollution subject to SDAPCD standards shall be discernible at the property line of the parcel upon which the use or operation is located.

Therefore, any unreasonable odor discernible at the property line of the project site will be considered a significant odor impact.

The City’s CEQA guidelines also address offensive odors. If sensitive receptors are proposed near an existing odor source, impacts are significant if the proposed sensitive use is located closer to the source than an existing sensitive receptor at which there has

been more than one confirmed complaint about the odor. If there are no existing sensitive receptors, impacts should be based on the distance and frequency of complaints of sensitive receptors located near similar odor sources.

5.0 Air Quality Assessment

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development, or local hot-spot effects stemming from sensitive receivers being placed close to highly congested roadways. In the case of this project, operational impacts are primarily due to emissions to the basin from mobile sources associated with the vehicular travel along the roadways within the project area.

Air emissions were calculated using California Emissions Estimator Model 2013.2.2 (CalEEMod; California Air Pollution Control Officers Association 2013). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California specific emission factors. The model estimates mass emissions from two basics sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage autos, medium truck, etc.), trip distribution (i.e., percent home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files contained in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_x, CO, SO_x, PM_{10}, $PM_{2.5}$, and ROGs, an ozone precursor, are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the state and federal lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

5.1 Construction-related Emissions

Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include:

- Fugitive dust from grading activities;
- Construction equipment exhaust;
- Construction-related trips by workers, delivery trucks, and material-hauling trucks; and
- Construction-related power consumption.

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in Regulation 4, Rules 52, 54, and 55, of the SDAPCD's rules and regulations.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more nitrogen oxides, sulfur oxides, and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROGs than do gasoline-powered engines. Standard construction equipment includes dozers, rollers, scrapers, dewatering pumps, backhoes, loaders, paving equipment, delivery/haul trucks, jacking equipment, welding machines, pile drivers, and so on.

Emissions associated with construction of this project were calculated using the CalEEMod program assuming that construction would begin in January 2016 and last for approximately one year. Primary inputs are the numbers of each piece of equipment and the length of each construction stage. Specific construction phasing and equipment parameters were obtained from the project engineer. Project construction would occur in six stages: demolition, site preparation, grading/excavation, drainage/utilities, building construction and architectural coatings, and paving. Construction phase lengths for demolition, site preparation, grading/excavation, and drainage/utilities were obtained from the project engineer. Default construction phase lengths for building construction and paving were assumed. These phase lengths are based on SCAQMD construction surveys. It was also assumed that the architectural coatings would be applied during the building construction phase. A VOC content of 150 grams per liter was assumed in accordance with SDAPCD Rule 67.0. Construction would include demolition of approximately 1,760 cubic yards of existing structures and 1,735 cubic yards of other materials on site including asphalt. Table 5 summarizes the construction equipment parameters.

For assessing the significance of the air quality emissions resulting during construction of the project, the construction emissions were compared to the City threshold levels shown in Table 4. As seen in Table 5, maximum daily construction emissions are projected to be less than the applicable thresholds for all criteria pollutants. Air quality impacts from construction activities would be less than significant.

TABLE 5
CONSTRUCTION EQUIPMENT PARAMETERS

Phase	Length (Days)	Equipment	Horsepower	Load Factor
Demolition	18	1 Backhoe	97	0.37
		2 Concrete/Industrial Saws	81	0.73
		1 Crushing/Processing Equipment	85	0.78
		1 Excavator	162	0.38
		1 Rubber Tired Loader	199	0.36
		1 Other Construction Equipment*	171	0.42
Site Preparation	3	1 Compactor	8	0.43
		1 Crawler Tractor/Tracked Dozer	208	0.43
		1 Excavator	162	0.38
		1 Rubber Tired Loader	199	0.36
		1 Scraper	361	0.48
Grading	10	1 Rubber Tired Loader	199	0.36
		1 Tractor	97	0.37
Drainage/Utilities	15	2 Backhoes	97	0.37
		1 Compactor	8	0.43
		1 Forklift	89	0.20
Building Construction	230	2 Backhoes	97	0.37
		2 Concrete/Industrial Saws	81	0.73
		1 Crane	226	0.29
		2 Forklifts	89	0.20
		4 Off-Highway Trucks	400	0.38
		3 Other Construction Equipment*	171	0.42
Architectural Coatings	230	1 Air Compressor	78	0.48
Paving	18	1 Roller	80	0.38
		1 Scraper	361	0.48
		1 Surfacing Equipment	253	0.30
		1 Trencher	80	0.50

*Other construction equipment includes generators, compressors, etc.

Table 6 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files for construction emissions are contained in Attachment 1.

TABLE 6
SUMMARY OF WORST-CASE CONSTRUCTION EMISSIONS
(pounds per day)

Pollutant	Maximum Daily Construction Emissions	Significance Thresholds[1]
ROG	15	75
NO_x	122	250
CO	74	550
SO_x[1]	0	250
PM_{10}	7	100
$PM_{2.5}$	6	55

[1] Significance threshold is based on the Escondido Municipal Code Section 33-924(G).

Note that the emissions summarized in Table 6 are the maximum emissions for each pollutant, and they are the daily amounts that may occur during different phases of construction. These are the estimated worst-case emissions.

5.2 Operation-related Emissions

5.2.1 Mobile and Area Source Emissions

Mobile source emissions would originate from traffic generated by the project. Area source emissions would result from activities such as the use of natural gas and consumer products. In addition, landscaping maintenance activities associated with the proposed land uses would produce pollutant emissions.

Operational emissions due to implementation of the project were calculated using CalEEMod. For the purposes of computing the emissions, it was assumed that build-out of the project would occur in 2015. CalEEMod estimates vehicle emissions by first calculating trip rate, trip length, trip purpose (e.g., home to work, home to shop, home to other), and trip type percentages for each land use type, based on the land use types and quantities entered by the user in the land use module. Trip generation rates were obtained from the traffic report prepared for the project (RK Engineering Group 2014). The proposed market would generate 6,525 average daily trips (ADT) and the proposed restaurant would generate 2,080 ADT for a total of 8,605 ADT. SANDAG's average regional trip length of 5.8 miles was assumed (SANDAG 2014). All other CalEEMod default trip characteristics were used.

Area source emissions associated with the proposed project include consumer products, architectural coatings, and landscaping equipment. Consumer products are chemically formulated products used by household and institutional consumer, including, but not limited to, detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints, but does not include other paint products, furniture coatings, or architectural coatings. Emissions due to consumer products are calculated using total building area and product emission factors.

For architectural coatings, VOC off-gasing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. VOC evaporative emissions are calculated using building surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year.

Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, roto tillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emissions associated with landscaping equipment are calculated using OFFROAD 2011 and CARB's Technical Memo: Change in Population and Activity Factors for Lawn and Garden Equipment

(CARB 2003). Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

A summary of the operational (area and mobile) emissions emitted to the SDAB for the project is shown in Table 7. CalEEMod output files for project operation are contained in Attachment 1.

TABLE 7
PROJECT AVERAGE DAILY EMISSIONS TO THE SAN DIEGO AIR BASIN
(pounds/day)

Season	Pollutant	Area Emission	Mobile Emission	Total Emission	Significance Threshold[1]
Summer	ROG	4	26	30	55
	NOx	0	33	34	250
	CO	0	173	173	550
	SOx[1]	0	0	0	250
	PM_{10}	0	16	16	100
	$PM_{2.5}$	0	5	5	55
Winter	ROG	4	29	33	55
	NOx	0	35	36	250
	CO	0	204	204	550
	SOx[1]	0	0	0	250
	PM_{10}	0	16	16	100
	$PM_{2.5}$	0	5	5	55

Note: Totals may vary due to independent rounding.
[1] Significance threshold is based on the Escondido Municipal Code Section 33-924(G).

As seen in Table 7, project generated emissions are projected to be less than the significance thresholds for all criteria pollutants. Air quality impacts due to project operation would be less than significant.

5.2.2 Localized Carbon Monoxide Impacts

Localized CO concentration is a direct function of motor vehicle activity at signalized intersections (e.g., idling time and traffic flow conditions), particularly during peak commute hours and meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses. Guidance for the evaluation of CO hot spots is provided in the *Transportation Project-level Carbon Monoxide Protocol* (CO protocol) (University of California, Davis 1997) prepared for the Environmental Program of the California Department of Transportation by the Institute of Transportation Studies, University of California Davis.

The SDAB is a CO maintenance area under the federal CAA. This means that SDAB was previously a non-attainment area and is currently implementing a 10-year plan for continuing to meet and maintain air quality standards. As a result, ambient CO levels have declined significantly. According to the CO Protocol, in maintenance areas, only

projects that are likely to worsen air quality necessitate further analysis. The CO Protocol indicates projects may worsen air quality if they worsen traffic flow, defined as increasing average delay at signalized intersections operating at level of service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F. Unsignalized intersections are not evaluated as they are typically signalized as volumes increase and delays increase, and traffic volumes at unsignalized intersections are typically much lower than at signalized intersections.

The traffic study prepared for the project includes anticipated traffic volumes at intersection near the project site. Between the project operational year (2016) and the project horizon year (2035), the following five signalized intersections are anticipated to operate at LOS E or worse:

- Centre City Parkway at El Norte Parkway *(LOS E/E during AM/PM Peak Hour)*
- Centre City Parkway at Mission Avenue *(LOS C/E during AM/PM Peak Hour)*
- North Broadway at SR 78/Lincoln Parkway *(LOS F/F during AM/PM Peak Hour)*
- North Broadway at Mission Avenue *(LOS E/E during AM/PM Peak Hour)*
- Fig Street at Lincoln Parkway *(LOS F/D during AM/PM Peak Hour)*

According to the CO protocol, the three worst intersections would require detailed modeling in order to determine if the CO emissions exceeded the thresholds. If one of the intersections fail then the next worse intersection would be modeled until it is determined that all remaining intersections would not exceed the national or California AAQS. The three worst intersections were chosen based on traffic volumes, delay, and intersection configuration. Based on a review of these intersections, the following three intersections are included in the detailed modeling:

- Centre City Parkway at Mission Avenue
- North Broadway at SR-78/Lincoln Parkway
- North Broadway at Mission Avenue

CALINE4, a computer air emission dispersion model, was used to calculate CO concentrations at receivers located at each intersection. These concentrations were derived from inputs including traffic volumes from the traffic analysis and emission factors from EMFAC2014 (State of California 2014b). The detailed modeling is based on the 2016 and 2035 peak hour (AM and PM) traffic volumes and emission factors from EMFAC2014. The one-hour background concentration of CO for the area, 3.2 ppm, was included in the model. This ambient concentration is considered conservative, as it was the highest recorded hourly concentration over the past five years at the Escondido – East Valley Parkway Air Quality Monitoring Station. This concentration was assumed for all intersections. The average regional temperature of 62 °F was included in the model as reported by the Western Regional Climate Center data for the project area. For a worst-case meteorological setting, the wind angle assumes all wind is blowing at each receptor. The mixing height of pollutants was set at 1,000 feet with a stable atmosphere.

The results of the modeling for these intersections are summarized in Table 8. CALINE4 output is contained in Attachment 2.

TABLE 8
MAXIMUM BUILDOUT CO CONCENTRATIONS
(CO PPM)

Roadway	Peak Hour Period	Operation Year (2016)		Horizon Year (2035)		Standard CAAQS/ NAAQS	
		1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Centre City Parkway/ Mission Avenue	AM	5.5	3.9	4.0	2.8	20/35	9.0/9
	PM	5.7	4.0	4.0	2.8		
North Broadway/ SR-78/Lincoln Parkway	AM	4.9	3.4	4.8	3.4		
	PM	5.1	3.6	4.3	3.0		
North Broadway/ Mission Avenue	AM	4.9	3.4	4.9	3.4		
	PM	5.5	3.9	5.2	3.6		

[1] 8-hour concentrations developed based on a 0.7 persistence factor.

As shown, the maximum 1-hour concentration would be 5.7 ppm. This concentration is below the federal and state 1-hour standards. In order to determine the 8-hour concentration, the 1-hour value was multiplied by a persistence factor of 0.7, as recommended in the CO Protocol. Based on this calculation, the maximum 8-hour concentration would be 3.9 ppm. Thus, increases of CO due to the project would be below the federal and state 8-hour standards. Therefore, localized air quality emissions would be less than significant.

5.3 Impact Analysis

1. *Would the project obstruct or conflict with the implementation of the San Diego RAQS or applicable portions of the SIP?*

The California Clean Air Act requires areas that are designated nonattainment of state ambient air quality standards for ozone, CO, SO_2, and NO_2 to prepare and implement plans to attain the standards by the earliest practicable date. The SDAB is designated nonattainment for ozone. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the state ozone standards. The two pollutants addressed in the RAQS are ROGs and NO_x, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions to maintain and further improve air quality. The RAQS, in conjunction with the TCM, were most recently adopted in 2009 as the air quality plan for the region.

The RAQS control measures focus on emission sources under the SDAPCD's authority, specifically stationary emission sources and some area-wide sources. The stationary source control measures identified in the RAQS have been developed by the SDAPCD

into regulations through a formal rulemaking process. Rules are developed to set limits on the amount of emissions from various types of sources and by requiring specific emission control technologies. Following rule adoption, a permit system is used to impose controls on new and modified stationary sources and to ensure compliance with regulations by prescribing specific operating conditions or equipment on a source. The project does not propose stationary emissions sources; thus, the project would not interfere with the RAQS control measures for stationary sources.

The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed in general plans. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the general plan would be consistent with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area. Growth projections used in the RAQS are developed by SANDAG based on local general plans and other related documents that are used to develop population and traffic projections. For this project, growth is evaluated against land use designations in the Escondido General Plan.

The Escondido General Plan designates the project site as General Commercial. This designation is intended to accommodate a wide variety of retail and service activities including local-serving commercial, community shopping/office complexes, automobile sales and service, eating and drinking establishments, and entertainment facilities. The City of Escondido's Zoning Code designates the proposed project site as General Commercial (C-G). The proposed project would be consistent with the current land use designation and zoning of the project site. Additionally, as discussed below under Issue 2, project emissions would not exceed significance thresholds from the Escondido Municipal Code. These thresholds are intended to both define quality of life standards and implement the Growth Management Element of the Escondido General Plan. Thus, the project would be consistent with the General Plan land use designation and policies of the General Plan the Growth Management Element.

Because the project would be consistent with the General Plan land use designation, the project would be consistent with the growth anticipated by the General Plan and SANDAG. The proposed project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

2. *Would the project result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Stationary sources contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources of air pollution are regulated by the SDAPCD. The project would construct a market and a restaurant, and would not create significant stationary sources of emissions. Impacts would be less than significant.

Impacts due to construction and operational emissions as well as impacts associated with CO hot spots are discussed under Issues 3 and 4 below.

3. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for ozone precursors)?*

The region is classified as attainment for all criterion pollutants except ozone, PM_{10}, and $PM_{2.5}$. Ozone is not emitted directly, but is produced indirectly as a result of the chemical reaction of NO_X and ROGs in the presence of sunlight. Thus, NO_X and ROGs are known as the chief "precursors" of ozone.

For assessing the potential cumulative significance of the air quality emissions, the project emissions were compared to the SDAPCD Air Quality Impact Assessment trigger levels for NO_X, ROGs, PM_{10}, and $PM_{2.5}$. The Escondido significance thresholds are the same as the SDAPCD Air Quality Impacts Assessment trigger levels. As shown in Tables 6 and 7, project emissions would be less than the applicable thresholds for all criteria pollutants. Impacts would be less than significant.

4. *Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?*

As shown in Table 8, the maximum 1-hour concentration would be 5.7 ppm and the maximum 8-hour concentration would be 3.9 ppm. These concentrations are less than the CAAQS and NAAQD standards. All other intersections that are projected to operate at LOS E or F would carry less peak hour traffic and experience shorter delays than these intersections. Thus, it can be concluded that CO concentrations at these intersections would be less than the CO concentrations shown in Table 8. There would be no harmful concentrations of CO and localized air quality emission would not exceed applicable standards with implementation of the project; therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

5. *Would the project create objectionable odors affecting a substantial number of people?*

The project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. The project does not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, this impact would be less than significant.

6.0 Conclusions and Recommendations

The primary goal of the RAQS is to reduce ozone precursor emissions. Because the project would be consistent with the General Plan land use designation, the project would be consistent with the growth anticipated by the General Plan and SANDAG. The proposed project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Additionally, as discussed in Section 5.0, Air Quality Assessment, construction and operational emissions would be less than the thresholds for all criteria pollutants. Thus, the project would not interfere with implementation of the RAQS or other air quality plans. Impacts would be less than significant.

With regard to criteria pollutants, construction, and operational emissions would be less than the Escondido Municipal Code significance thresholds for all criteria pollutants. Impacts would be less than significant and no mitigation is required. Additionally, there would be no harmful concentrations of CO, and localized air quality emission would not exceed applicable standards with implementation of the project; therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

8.0 References Cited

California Air Pollution Control Officers Association (CAPCOA)

2013 California Emissions Estimator model (CalEEMod). User's Guide Version 2013.2.2 September.

California, State of

2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. California Air Resources Board. Stationary Source Division, Mobile Source Control Division. October.

2005a Air Quality and Land Use Handbook: A Community Health Perspective. California Air Resources Board. April.

2005b The California Almanac of Emissions and Air Quality—2005 Edition. Planning and Technical Support Division. California Air Resources Board.

2013 Ambient Air Quality Standards. California Air Resources Board. June 4.

2014 California Air Quality Data Statistics. California Air Resources Board Internet Site. http://www.arb.ca.gov/adam/welcome.html. Top 4 Summary and Hourly Listing. Accessed June 16.

2014b EMFAC 2014. Obtained from the CARB website at http://www.arb.ca.gov/msei/modeling.htm on January 6.

RK Engineering Group

2014 Centerpointe 78 Traffic Impact Analysis, City of Escondido, California. June 19.

San Diego Association of Governments (SANDAG)

2014 Correspondence with RECON and SANDAG on 03/20/14 confirming the urban regional trip length of 5.8 miles derived from Series 12 base year (2008) model.

San Diego, County of

1992 1991/1992 Regional Air Quality Strategies. Air Pollution Control District. June.

1998 Air Quality in San Diego County. 1997 Annual Report. San Diego Air Pollution Control District.

1999 Air Quality in San Diego County. 1998 Annual Report. San Diego Air Pollution Control District.

2007 County of San Diego Guidelines for Determining Significance and Report Format and Contents Requirements. March 19, 2007.

2008 Air Quality in San Diego County. 2007 Annual Report. San Diego Air Pollution Control District.

2009 Air Quality in San Diego County. 2008 Annual Report. San Diego Air Pollution Control District.

South Coast Air Quality Management District (SCAQMD)

2006 Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds. October.

U.C. Davis Institute of Transportation Studies

1997 Transportation Project-Level Carbon Monoxide Protocol. December. Davis, CA.

U.S. Environmental Protection Agency (EPA)

2004 Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards; Final Rule. Federal Register 70(3):944-1019, January 5.

2009 Air Quality Designations for the 2006 24-Hour Fine Particle (PM2.5) National Ambient Air Quality Standards: Final Rule. Federal Register 74(218): 58717. November 13.

Western Regional Climate Center

2014 Western U.S. Climate Historical Summaries: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2862 and http://www.wrcc.dri.edu/cgi-bin/clilcd.pl?ca23188. Accessed June 16.

ATTACHMENTS

THIS PAGE IS INTENTIONALLY BLANK.

ATTACHMENT 1

CalEEMod Output Files

THIS PAGE IS INTENTIONALLY BLANK.

7374 Centerpointe 78

San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.63	Acre	2.63	114,562.80	0
Fast Food Restaurant with Drive Thru	3.20	1000sqft	0.07	3,200.00	0
Supermarket	43.50	1000sqft	1.00	43,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2017
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 43,500 sf market
3,200 sf drive thru restuarant
199 parking spaces
3.7 acre site

Construction Phase - Phase lengths per project manager.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Demolition -

Grading -

Architectural Coating - SDAPCD VOC content limit = 150 g/L

Vehicle Trips - 5.8 mile trip length (SANDAG 2014)
Trip Rates (RK Engineering Group 2014)

Area Coating - SDAPCD VOC content limit - 150 g/L

Energy Mitigation -

Water Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00

tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	PhaseEndDate	11/20/2017	1/2/2017
tblConstructionPhase	PhaseEndDate	1/23/2017	1/2/2017
tblConstructionPhase	PhaseEndDate	1/26/2017	1/2/2017
tblConstructionPhase	PhaseStartDate	1/3/2017	2/16/2016
tblConstructionPhase	PhaseStartDate	3/8/2016	2/16/2016
tblConstructionPhase	PhaseStartDate	1/3/2017	12/8/2016
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading

tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	ST_TR	722.03	650.00
tblVehicleTrips	ST_TR	177.59	150.00
tblVehicleTrips	SU_TR	542.72	650.00
tblVehicleTrips	SU_TR	166.44	150.00
tblVehicleTrips	WD_TR	496.12	650.00
tblVehicleTrips	WD_TR	102.24	150.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.1628	122.2574	74.4022	0.1364	2.0966	6.1198	6.8260	0.3519	5.7015	5.8916	0.0000	13,872.9282	13,872.9282	3.6043	0.0000	13,948.6184
2017	14.3348	112.7873	71.3007	0.1364	0.7062	5.5968	6.3030	0.1901	5.2120	5.4021	0.0000	13,662.4061	13,662.4061	3.5867	0.0000	13,737.7272
Total	**29.4976**	**235.0447**	**145.7029**	**0.2728**	**2.8028**	**11.7166**	**13.1291**	**0.5420**	**10.9135**	**11.2937**	**0.0000**	**27,535.3343**	**27,535.3343**	**7.1910**	**0.0000**	**27,686.3455**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.1628	122.2574	74.4022	0.1364	2.0966	6.1198	6.8260	0.3519	5.7015	5.8916	0.0000	13,872.9282	13,872.9282	3.6043	0.0000	13,948.6184
2017	14.3348	112.7873	71.3007	0.1364	0.7062	5.5968	6.3030	0.1901	5.2120	5.4021	0.0000	13,662.4061	13,662.4061	3.5867	0.0000	13,737.7272
Total	**29.4976**	**235.0447**	**145.7029**	**0.2728**	**2.8028**	**11.7166**	**13.1291**	**0.5420**	**10.9135**	**11.2937**	**0.0000**	**27,535.3343**	**27,535.3343**	**7.1910**	**0.0000**	**27,686.3455**

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

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Energy	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
Mobile	28.9622	35.2394	203.7803	0.2339	15.5367	0.3961	15.9328	4.1473	0.3636	4.5109		20,894.4823	20,894.4823	1.1320		20,918.2543
Total	**32.6503**	**35.6904**	**204.1643**	**0.2366**	**15.5367**	**0.4304**	**15.9671**	**4.1473**	**0.3979**	**4.5452**		**21,435.6492**	**21,435.6492**	**1.1424**	**9.9200e-003**	**21,462.7153**

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Energy	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
Mobile	28.9622	35.2394	203.7803	0.2339	15.5367	0.3961	15.9328	4.1473	0.3636	4.5109		20,894.4823	20,894.4823	1.1320		20,918.2543
Total	**32.6503**	**35.6904**	**204.1643**	**0.2366**	**15.5367**	**0.4304**	**15.9671**	**4.1473**	**0.3979**	**4.5452**		**21,435.6492**	**21,435.6492**	**1.1424**	**9.9200e-003**	**21,462.7153**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2016	1/27/2016	5	18	
2	Site Preparation	Site Preparation	1/28/2016	2/1/2016	5	3	
3	Grading	Grading	2/2/2016	2/15/2016	5	10	
4	Drainage/Utilities/Sub-Grade	Trenching	2/16/2016	3/7/2016	5	15	
5	Building Construction	Building Construction	2/16/2016	1/2/2017	5	230	
6	Architectural Coatings	Architectural Coating	2/16/2016	1/2/2017	5	230	
7	Paving	Paving	12/8/2016	1/2/2017	5	18	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 73,632; Non-Residential Outdoor: 24,544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	1	8.00	162	0.38
Demolition	Other Construction Equipment	1	8.00	171	0.42

Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Crawler Tractors	1	8.00	208	0.43
Site Preparation	Excavators	1	8.00	162	0.38
Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	199	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	1	2.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Off-Highway Trucks	4	8.00	400	0.38
Building Construction	Other Construction Equipment	3	8.00	171	0.42
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coatings	Air Compressors	1	6.00	78	0.48
Drainage/Utilities/Sub-Grade	Forklifts	1	8.00	89	0.20
Drainage/Utilities/Sub-Grade	Plate Compactors	1	8.00	8	0.43
Drainage/Utilities/Sub-Grade	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56

Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	0	6.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Scrapers	1	8.00	361	0.48
Paving	Surfacing Equipment	1	8.00	253	0.30
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	148.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	49.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coatings	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Sub-Grade	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8055	0.0000	1.8055	0.2734	0.0000	0.2734			0.0000			0.0000
Off-Road	4.0250	36.1772	23.9485	0.0402		2.2143	2.2143		2.1282	2.1282		3,998.1959	3,998.1959	0.8387		4,015.8094
Total	**4.0250**	**36.1772**	**23.9485**	**0.0402**	**1.8055**	**2.2143**	**4.0198**	**0.2734**	**2.1282**	**2.4016**		**3,998.1959**	**3,998.1959**	**0.8387**		**4,015.8094**

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	0.1794	2.3785	2.1249	6.1400e-003	0.1433	0.0316	0.1748	0.0392	0.0290	0.0683		618.2369	618.2369	4.4700e-003		618.3307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.2461**	**2.4613**	**2.9072**	**7.9000e-003**	**0.2911**	**0.0327**	**0.3238**	**0.0785**	**0.0301**	**0.1085**		**765.0578**	**765.0578**	**0.0123**		**765.3161**

3.2 Demolition - 2016

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					1.8055	0.0000	1.8055	0.2734	0.0000	0.2734			0.0000			0.0000
Off-Road	4.0250	36.1772	23.9485	0.0402		2.2143	2.2143		2.1282	2.1282	0.0000	3,998.1959	3,998.1959	0.8387		4,015.8094
Total	**4.0250**	**36.1772**	**23.9485**	**0.0402**	**1.8055**	**2.2143**	**4.0198**	**0.2734**	**2.1282**	**2.4016**	**0.0000**	**3,998.1959**	**3,998.1959**	**0.8387**		**4,015.8094**

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	0.1794	2.3785	2.1249	6.1400e-003	0.1433	0.0316	0.1748	0.0392	0.0290	0.0683		618.2369	618.2369	4.4700e-003		618.3307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0667	0.0829	0.7823	1.7600e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		146.8209	146.8209	7.8300e-003		146.9854
Total	**0.2461**	**2.4613**	**2.9072**	**7.9000e-003**	**0.2911**	**0.0327**	**0.3238**	**0.0785**	**0.0301**	**0.1085**		**765.0578**	**765.0578**	**0.0123**		**765.3161**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	3.0155	38.2804	19.3392	0.0345		1.5253	1.5253		1.4040	1.4040		3,568.5748	3,568.5748	1.0696		3,591.0362
Total	**3.0155**	**38.2804**	**19.3392**	**0.0345**	**1.5908**	**1.5253**	**3.1160**	**0.1718**	**1.4040**	**1.5758**		**3,568.5748**	**3,568.5748**	**1.0696**		**3,591.0362**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0598	0.5650	1.2700e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		106.0373	106.0373	5.6600e-003		106.1561
Total	**0.0482**	**0.0598**	**0.5650**	**1.2700e-003**	**0.1068**	**8.0000e-004**	**0.1076**	**0.0283**	**7.4000e-004**	**0.0291**		**106.0373**	**106.0373**	**5.6600e-003**		**106.1561**

3.3 Site Preparation - 2016

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	3.0155	38.2804	19.3392	0.0345		1.5253	1.5253		1.4040	1.4040	0.0000	3,568.5748	3,568.5748	1.0696		3,591.0362
Total	**3.0155**	**38.2804**	**19.3392**	**0.0345**	**1.5908**	**1.5253**	**3.1160**	**0.1718**	**1.4040**	**1.5758**	**0.0000**	**3,568.5748**	**3,568.5748**	**1.0696**		**3,591.0362**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0598	0.5650	1.2700e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		106.0373	106.0373	5.6600e-003		106.1561
Total	**0.0482**	**0.0598**	**0.5650**	**1.2700e-003**	**0.1068**	**8.0000e-004**	**0.1076**	**0.0283**	**7.4000e-004**	**0.0291**		**106.0373**	**106.0373**	**5.6600e-003**		**106.1561**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8375	9.7181	4.2474	9.2400e-003		0.4710	0.4710		0.4334	0.4334		960.0511	960.0511	0.2896		966.1324
Total	**0.8375**	**9.7181**	**4.2474**	**9.2400e-003**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4334**	**0.4334**		**960.0511**	**960.0511**	**0.2896**		**966.1324**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0185	0.0230	0.2173	4.9000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		40.7836	40.7836	2.1800e-003		40.8293
Total	**0.0185**	**0.0230**	**0.2173**	**4.9000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**40.7836**	**40.7836**	**2.1800e-003**		**40.8293**

3.4 Grading - 2016

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8375	9.7181	4.2474	9.2400e-003		0.4710	0.4710		0.4334	0.4334	0.0000	960.0511	960.0511	0.2896		966.1324
Total	**0.8375**	**9.7181**	**4.2474**	**9.2400e-003**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4334**	**0.4334**	**0.0000**	**960.0511**	**960.0511**	**0.2896**		**966.1324**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0185	0.0230	0.2173	4.9000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		40.7836	40.7836	2.1800e-003		40.8293
Total	**0.0185**	**0.0230**	**0.2173**	**4.9000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**40.7836**	**40.7836**	**2.1800e-003**		**40.8293**

3.5 Drainage/Utilities/Sub-Grade - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9482	8.7147	6.2987	8.2400e-003		0.6743	0.6743		0.6212	0.6212		840.5559	840.5559	0.2467		845.7370
Total	**0.9482**	**8.7147**	**6.2987**	**8.2400e-003**		**0.6743**	**0.6743**		**0.6212**	**0.6212**		**840.5559**	**840.5559**	**0.2467**		**845.7370**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.5 Drainage/Utilities/Sub-Grade - 2016

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	0.9482	8.7147	6.2987	8.2400e-003		0.6743	0.6743		0.6212	0.6212	0.0000	840.5559	840.5559	0.2467		845.7370
Total	**0.9482**	**8.7147**	**6.2987**	**8.2400e-003**		**0.6743**	**0.6743**		**0.6212**	**0.6212**	**0.0000**	**840.5559**	**840.5559**	**0.2467**		**845.7370**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.3688	87.3087	48.6195	0.0943		4.4195	4.4195		4.1215	4.1215		9,679.1623	9,679.1623	2.6768		9,735.3742
Total	**8.3688**	**87.3087**	**48.6195**	**0.0943**		**4.4195**	**4.4195**		**4.1215**	**4.1215**		**9,679.1623**	**9,679.1623**	**2.6768**		**9,735.3742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2534	2.0384	3.1439	4.9700e-003	0.1394	0.0304	0.1698	0.0398	0.0280	0.0677		497.1943	497.1943	3.9700e-003		497.2777
Worker	0.1816	0.2255	2.1297	4.7900e-003	0.4025	3.0200e-003	0.4055	0.1068	2.7800e-003	0.1095		399.6790	399.6790	0.0213		400.1268
Total	**0.4350**	**2.2640**	**5.2736**	**9.7600e-003**	**0.5419**	**0.0334**	**0.5753**	**0.1465**	**0.0307**	**0.1773**		**896.8733**	**896.8733**	**0.0253**		**897.4045**

3.6 Building Construction - 2016

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	8.3688	87.3087	48.6195	0.0943		4.4195	4.4195		4.1215	4.1215	0.0000	9,679.1623	9,679.1623	2.6768		9,735.3742
Total	**8.3688**	**87.3087**	**48.6195**	**0.0943**		**4.4195**	**4.4195**		**4.1215**	**4.1215**	**0.0000**	**9,679.1623**	**9,679.1623**	**2.6768**		**9,735.3742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2534	2.0384	3.1439	4.9700e-003	0.1394	0.0304	0.1698	0.0398	0.0280	0.0677		497.1943	497.1943	3.9700e-003		497.2777
Worker	0.1816	0.2255	2.1297	4.7900e-003	0.4025	3.0200e-003	0.4055	0.1068	2.7800e-003	0.1095		399.6790	399.6790	0.0213		400.1268
Total	**0.4350**	**2.2640**	**5.2736**	**9.7600e-003**	**0.5419**	**0.0334**	**0.5753**	**0.1465**	**0.0307**	**0.1773**		**896.8733**	**896.8733**	**0.0253**		**897.4045**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.7688	80.4020	46.8980	0.0942		4.0215	4.0215		3.7489	3.7489		9,540.2979	9,540.2979	2.6642		9,596.2468
Total	**7.7688**	**80.4020**	**46.8980**	**0.0942**		**4.0215**	**4.0215**		**3.7489**	**3.7489**		**9,540.2979**	**9,540.2979**	**2.6642**		**9,596.2468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2316	1.8219	2.9778	4.9600e-003	0.1394	0.0264	0.1658	0.0398	0.0243	0.0640		488.7831	488.7831	3.7600e-003		488.8621
Worker	0.1645	0.2050	1.9167	4.7900e-003	0.4025	2.9300e-003	0.4055	0.1068	2.7000e-003	0.1095		384.2326	384.2326	0.0197		384.6469
Total	**0.3961**	**2.0269**	**4.8946**	**9.7500e-003**	**0.5419**	**0.0293**	**0.5712**	**0.1465**	**0.0270**	**0.1735**		**873.0157**	**873.0157**	**0.0235**		**873.5089**

3.6 Building Construction - 2017

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	7.7688	80.4020	46.8980	0.0942		4.0215	4.0215		3.7489	3.7489	0.0000	9,540.2979	9,540.2979	2.6642		9,596.2468
Total	**7.7688**	**80.4020**	**46.8980**	**0.0942**		**4.0215**	**4.0215**		**3.7489**	**3.7489**	**0.0000**	**9,540.2979**	**9,540.2979**	**2.6642**		**9,596.2468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2316	1.8219	2.9778	4.9600e-003	0.1394	0.0264	0.1658	0.0398	0.0243	0.0640		488.7831	488.7831	3.7600e-003		488.8621
Worker	0.1645	0.2050	1.9167	4.7900e-003	0.4025	2.9300e-003	0.4055	0.1068	2.7000e-003	0.1095		384.2326	384.2326	0.0197		384.6469
Total	**0.3961**	**2.0269**	**4.8946**	**9.7500e-003**	**0.5419**	**0.0293**	**0.5712**	**0.1465**	**0.0270**	**0.1735**		**873.0157**	**873.0157**	**0.0235**		**873.5089**

3.7 Architectural Coatings - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**3.3362**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.7 Architectural Coatings - 2016

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	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**3.3362**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.7 Architectural Coatings - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**3.3000**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0418	0.3912	9.8000e-004	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		78.4148	78.4148	4.0300e-003		78.4994
Total	**0.0336**	**0.0418**	**0.3912**	**9.8000e-004**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**78.4148**	**78.4148**	**4.0300e-003**		**78.4994**

3.7 Architectural Coatings - 2017

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	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**3.3000**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0418	0.3912	9.8000e-004	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		78.4148	78.4148	4.0300e-003		78.4994
Total	**0.0336**	**0.0418**	**0.3912**	**9.8000e-004**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**78.4148**	**78.4148**	**4.0300e-003**		**78.4994**

3.8 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5659	30.2205	17.7559	0.0275		1.4691	1.4691		1.3516	1.3516		2,852.3103	2,852.3103	0.8604		2,870.3778
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9487**	**30.2205**	**17.7559**	**0.0275**		**1.4691**	**1.4691**		**1.3516**	**1.3516**		**2,852.3103**	**2,852.3103**	**0.8604**		**2,870.3778**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.8 Paving - 2016

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	2.5659	30.2205	17.7559	0.0275		1.4691	1.4691		1.3516	1.3516	0.0000	2,852.3103	2,852.3103	0.8604		2,870.3778
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9487**	**30.2205**	**17.7559**	**0.0275**		**1.4691**	**1.4691**		**1.3516**	**1.3516**	**0.0000**	**2,852.3103**	**2,852.3103**	**0.8604**		**2,870.3778**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0371	0.0460	0.4346	9.8000e-004	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		81.5671	81.5671	4.3500e-003		81.6585
Total	**0.0371**	**0.0460**	**0.4346**	**9.8000e-004**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**81.5671**	**81.5671**	**4.3500e-003**		**81.6585**

3.8 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4200	28.0897	16.8577	0.0275		1.3715	1.3715		1.2617	1.2617		2,810.8148	2,810.8148	0.8612		2,828.9006
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8028**	**28.0897**	**16.8577**	**0.0275**		**1.3715**	**1.3715**		**1.2617**	**1.2617**		**2,810.8148**	**2,810.8148**	**0.8612**		**2,828.9006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0418	0.3912	9.8000e-004	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		78.4148	78.4148	4.0300e-003		78.4994
Total	**0.0336**	**0.0418**	**0.3912**	**9.8000e-004**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**78.4148**	**78.4148**	**4.0300e-003**		**78.4994**

3.8 Paving - 2017

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	2.4200	28.0897	16.8577	0.0275		1.3715	1.3715		1.2617	1.2617	0.0000	2,810.8148	2,810.8148	0.8612		2,828.9006
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8028**	**28.0897**	**16.8577**	**0.0275**		**1.3715**	**1.3715**		**1.2617**	**1.2617**	**0.0000**	**2,810.8148**	**2,810.8148**	**0.8612**		**2,828.9006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0336	0.0418	0.3912	9.8000e-004	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		78.4148	78.4148	4.0300e-003		78.4994
Total	**0.0336**	**0.0418**	**0.3912**	**9.8000e-004**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**78.4148**	**78.4148**	**4.0300e-003**		**78.4994**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	28.9622	35.2394	203.7803	0.2339	15.5367	0.3961	15.9328	4.1473	0.3636	4.5109		20,894.4823	20,894.4823	1.1320		20,918.2543
Unmitigated	28.9622	35.2394	203.7803	0.2339	15.5367	0.3961	15.9328	4.1473	0.3636	4.5109		20,894.4823	20,894.4823	1.1320		20,918.2543

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	2,080.00	2,080.00	2080.00	1,541,875	1,541,875
Parking Lot	0.00	0.00	0.00		
Supermarket	6,525.00	6,525.00	6525.00	5,802,369	5,802,369
Total	8,605.00	8,605.00	8,605.00	7,344,244	7,344,244

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	5.80	5.80	5.80	2.20	78.80	19.00	29	21	50
Parking Lot	5.80	5.80	5.80	0.00	0.00	0.00	0	0	0
Supermarket	5.80	5.80	5.80	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
NaturalGas Unmitigated	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	3054.53	0.0329	0.2995	0.2516	1.8000e-003		0.0228	0.0228		0.0228	0.0228		359.3570	359.3570	6.8900e-003	6.5900e-003	361.5440
Fast Food Restaurant with Drive Thru	1545.29	0.0167	0.1515	0.1273	9.1000e-004		0.0115	0.0115		0.0115	0.0115		181.7992	181.7992	3.4800e-003	3.3300e-003	182.9056
Total		**0.0496**	**0.4510**	**0.3788**	**2.7100e-003**		**0.0343**	**0.0343**		**0.0343**	**0.0343**		**541.1562**	**541.1562**	**0.0104**	**9.9200e-003**	**544.4496**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	3.05453	0.0329	0.2995	0.2516	1.8000e-003		0.0228	0.0228		0.0228	0.0228		359.3570	359.3570	6.8900e-003	6.5900e-003	361.5440
Fast Food Restaurant with Drive Thru	1.54529	0.0167	0.1515	0.1273	9.1000e-004		0.0115	0.0115		0.0115	0.0115		181.7992	181.7992	3.4800e-003	3.3300e-003	182.9056
Total		**0.0496**	**0.4510**	**0.3788**	**2.7100e-003**		**0.0343**	**0.0343**		**0.0343**	**0.0343**		**541.1562**	**541.1562**	**0.0104**	**9.9200e-003**	**544.4496**

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Unmitigated	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114

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	0.1870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Total	**3.6385**	**5.0000e-005**	**5.1300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0108**	**0.0108**	**3.0000e-005**		**0.0114**

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	0.1870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Total	**3.6385**	**5.0000e-005**	**5.1300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0108**	**0.0108**	**3.0000e-005**		**0.0114**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

7374 Centerpointe 78

San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	2.63	Acre	2.63	114,562.80	0
Fast Food Restaurant with Drive Thru	3.20	1000sqft	0.07	3,200.00	0
Supermarket	43.50	1000sqft	1.00	43,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2017
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 43,500 sf market
3,200 sf drive thru restuarant
199 parking spaces
3.7 acre site

Construction Phase - Phase lengths per project manager.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Off-road Equipment - Equipment per project manager

Demolition -

Grading -

Architectural Coating - SDAPCD VOC content limit = 150 g/L

Vehicle Trips - 5.8 mile trip length (SANDAG 2014)
Trip Rates (RK Engineering Group 2014)

Area Coating - SDAPCD VOC content limit - 150 g/L

Energy Mitigation -

Water Mitigation -

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00

tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblConstructionPhase	NumDays	18.00	230.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	8.00	10.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	PhaseEndDate	11/20/2017	1/2/2017
tblConstructionPhase	PhaseEndDate	1/23/2017	1/2/2017
tblConstructionPhase	PhaseEndDate	1/26/2017	1/2/2017
tblConstructionPhase	PhaseStartDate	1/3/2017	2/16/2016
tblConstructionPhase	PhaseStartDate	3/8/2016	2/16/2016
tblConstructionPhase	PhaseStartDate	1/3/2017	12/8/2016
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading

tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Drainage/Utilities/Sub-Grade
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CC_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CNW_TL	7.30	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	CW_TL	9.50	5.80
tblVehicleTrips	ST_TR	722.03	650.00
tblVehicleTrips	ST_TR	177.59	150.00
tblVehicleTrips	SU_TR	542.72	650.00
tblVehicleTrips	SU_TR	166.44	150.00
tblVehicleTrips	WD_TR	496.12	650.00
tblVehicleTrips	WD_TR	102.24	150.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.1139	122.1747	73.6823	0.1369	2.0966	6.1195	6.8257	0.3519	5.7012	5.8913	0.0000	13,913.2434	13,913.2434	3.6042	0.0000	13,988.9315
2017	14.2916	112.7137	70.6085	0.1368	0.7062	5.5966	6.3028	0.1901	5.2118	5.4019	0.0000	13,701.2944	13,701.2944	3.5866	0.0000	13,776.6133
Total	**29.4056**	**234.8884**	**144.2908**	**0.2737**	**2.8028**	**11.7161**	**13.1285**	**0.5420**	**10.9130**	**11.2932**	**0.0000**	**27,614.5378**	**27,614.5378**	**7.1908**	**0.0000**	**27,765.5448**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	15.1139	122.1747	73.6823	0.1369	2.0966	6.1195	6.8257	0.3519	5.7012	5.8913	0.0000	13,913.2434	13,913.2434	3.6042	0.0000	13,988.9315
2017	14.2916	112.7137	70.6085	0.1368	0.7062	5.5966	6.3028	0.1901	5.2118	5.4019	0.0000	13,701.2944	13,701.2944	3.5866	0.0000	13,776.6133
Total	**29.4056**	**234.8884**	**144.2908**	**0.2737**	**2.8028**	**11.7161**	**13.1285**	**0.5420**	**10.9130**	**11.2932**	**0.0000**	**27,614.5377**	**27,614.5377**	**7.1908**	**0.0000**	**27,765.5448**

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

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Energy	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
Mobile	26.3925	33.3198	172.9175	0.2452	15.5367	0.3896	15.9263	4.1473	0.3576	4.5049		21,941.0024	21,941.0024	1.1303		21,964.7390
Total	**30.0806**	**33.7708**	**173.3014**	**0.2480**	**15.5367**	**0.4239**	**15.9606**	**4.1473**	**0.3919**	**4.5392**		**22,482.1694**	**22,482.1694**	**1.1407**	**9.9200e-003**	**22,509.2000**

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Energy	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
Mobile	26.3925	33.3198	172.9175	0.2452	15.5367	0.3896	15.9263	4.1473	0.3576	4.5049		21,941.0024	21,941.0024	1.1303		21,964.7390
Total	**30.0806**	**33.7708**	**173.3014**	**0.2480**	**15.5367**	**0.4239**	**15.9606**	**4.1473**	**0.3919**	**4.5392**		**22,482.1694**	**22,482.1694**	**1.1407**	**9.9200e-003**	**22,509.2000**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2016	1/27/2016	5	18	
2	Site Preparation	Site Preparation	1/28/2016	2/1/2016	5	3	
3	Grading	Grading	2/2/2016	2/15/2016	5	10	
4	Drainage/Utilities/Sub-Grade	Trenching	2/16/2016	3/7/2016	5	15	
5	Building Construction	Building Construction	2/16/2016	1/2/2017	5	230	
6	Architectural Coatings	Architectural Coating	2/16/2016	1/2/2017	5	230	
7	Paving	Paving	12/8/2016	1/2/2017	5	18	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 73,632; Non-Residential Outdoor: 24,544 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Excavators	1	8.00	162	0.38
Demolition	Other Construction Equipment	1	8.00	171	0.42

Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Rubber Tired Loaders	1	8.00	199	0.36
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Crawler Tractors	1	8.00	208	0.43
Site Preparation	Excavators	1	8.00	162	0.38
Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	199	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Rubber Tired Loaders	1	8.00	199	0.36
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Concrete/Industrial Saws	2	8.00	81	0.73
Building Construction	Cranes	1	2.00	226	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Off-Highway Trucks	4	8.00	400	0.38
Building Construction	Other Construction Equipment	3	8.00	171	0.42
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Architectural Coatings	Air Compressors	1	6.00	78	0.48
Drainage/Utilities/Sub-Grade	Forklifts	1	8.00	89	0.20
Drainage/Utilities/Sub-Grade	Plate Compactors	1	8.00	8	0.43
Drainage/Utilities/Sub-Grade	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56

Paving	Pavers	0	8.00	125	0.42
Paving	Paving Equipment	0	6.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Scrapers	1	8.00	361	0.48
Paving	Surfacing Equipment	1	8.00	253	0.30
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Trenchers	1	8.00	80	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	7	18.00	0.00	148.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	49.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coatings	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Drainage/Utilities/Sub-Grade	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8055	0.0000	1.8055	0.2734	0.0000	0.2734			0.0000			0.0000
Off-Road	4.0250	36.1772	23.9485	0.0402		2.2143	2.2143		2.1282	2.1282		3,998.1959	3,998.1959	0.8387		4,015.8094
Total	**4.0250**	**36.1772**	**23.9485**	**0.0402**	**1.8055**	**2.2143**	**4.0198**	**0.2734**	**2.1282**	**2.4016**		**3,998.1959**	**3,998.1959**	**0.8387**		**4,015.8094**

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	0.1612	2.3041	1.6448	6.1500e-003	0.1433	0.0315	0.1748	0.0392	0.0290	0.0682		619.6903	619.6903	4.4100e-003		619.7829
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.2241**	**2.3780**	**2.4501**	**8.0200e-003**	**0.2911**	**0.0326**	**0.3237**	**0.0785**	**0.0300**	**0.1084**		**776.0260**	**776.0260**	**0.0122**		**776.2831**

3.2 Demolition - 2016

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					1.8055	0.0000	1.8055	0.2734	0.0000	0.2734			0.0000			0.0000
Off-Road	4.0250	36.1772	23.9485	0.0402		2.2143	2.2143		2.1282	2.1282	0.0000	3,998.1959	3,998.1959	0.8387		4,015.8094
Total	**4.0250**	**36.1772**	**23.9485**	**0.0402**	**1.8055**	**2.2143**	**4.0198**	**0.2734**	**2.1282**	**2.4016**	**0.0000**	**3,998.1959**	**3,998.1959**	**0.8387**		**4,015.8094**

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	0.1612	2.3041	1.6448	6.1500e-003	0.1433	0.0315	0.1748	0.0392	0.0290	0.0682		619.6903	619.6903	4.4100e-003		619.7829
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0629	0.0738	0.8053	1.8700e-003	0.1479	1.1100e-003	0.1490	0.0392	1.0200e-003	0.0402		156.3358	156.3358	7.8300e-003		156.5002
Total	**0.2241**	**2.3780**	**2.4501**	**8.0200e-003**	**0.2911**	**0.0326**	**0.3237**	**0.0785**	**0.0300**	**0.1084**		**776.0260**	**776.0260**	**0.0122**		**776.2831**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	3.0155	38.2804	19.3392	0.0345		1.5253	1.5253		1.4040	1.4040		3,568.5748	3,568.5748	1.0696		3,591.0362
Total	**3.0155**	**38.2804**	**19.3392**	**0.0345**	**1.5908**	**1.5253**	**3.1160**	**0.1718**	**1.4040**	**1.5758**		**3,568.5748**	**3,568.5748**	**1.0696**		**3,591.0362**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0533	0.5816	1.3500e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		112.9092	112.9092	5.6600e-003		113.0280
Total	**0.0454**	**0.0533**	**0.5816**	**1.3500e-003**	**0.1068**	**8.0000e-004**	**0.1076**	**0.0283**	**7.4000e-004**	**0.0291**		**112.9092**	**112.9092**	**5.6600e-003**		**113.0280**

3.3 Site Preparation - 2016

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	3.0155	38.2804	19.3392	0.0345		1.5253	1.5253		1.4040	1.4040	0.0000	3,568.5748	3,568.5748	1.0696		3,591.0362
Total	**3.0155**	**38.2804**	**19.3392**	**0.0345**	**1.5908**	**1.5253**	**3.1160**	**0.1718**	**1.4040**	**1.5758**	**0.0000**	**3,568.5748**	**3,568.5748**	**1.0696**		**3,591.0362**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0533	0.5816	1.3500e-003	0.1068	8.0000e-004	0.1076	0.0283	7.4000e-004	0.0291		112.9092	112.9092	5.6600e-003		113.0280
Total	**0.0454**	**0.0533**	**0.5816**	**1.3500e-003**	**0.1068**	**8.0000e-004**	**0.1076**	**0.0283**	**7.4000e-004**	**0.0291**		**112.9092**	**112.9092**	**5.6600e-003**		**113.0280**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8375	9.7181	4.2474	9.2400e-003		0.4710	0.4710		0.4334	0.4334		960.0511	960.0511	0.2896		966.1324
Total	**0.8375**	**9.7181**	**4.2474**	**9.2400e-003**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4334**	**0.4334**		**960.0511**	**960.0511**	**0.2896**		**966.1324**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	**0.0175**	**0.0205**	**0.2237**	**5.2000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**43.4266**	**43.4266**	**2.1800e-003**		**43.4723**

3.4 Grading - 2016

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8375	9.7181	4.2474	9.2400e-003		0.4710	0.4710		0.4334	0.4334	0.0000	960.0511	960.0511	0.2896		966.1324
Total	**0.8375**	**9.7181**	**4.2474**	**9.2400e-003**	**0.0000**	**0.4710**	**0.4710**	**0.0000**	**0.4334**	**0.4334**	**0.0000**	**960.0511**	**960.0511**	**0.2896**		**966.1324**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	**0.0175**	**0.0205**	**0.2237**	**5.2000e-004**	**0.0411**	**3.1000e-004**	**0.0414**	**0.0109**	**2.8000e-004**	**0.0112**		**43.4266**	**43.4266**	**2.1800e-003**		**43.4723**

3.5 Drainage/Utilities/Sub-Grade - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9482	8.7147	6.2987	8.2400e-003		0.6743	0.6743		0.6212	0.6212		840.5559	840.5559	0.2467		845.7370
Total	**0.9482**	**8.7147**	**6.2987**	**8.2400e-003**		**0.6743**	**0.6743**		**0.6212**	**0.6212**		**840.5559**	**840.5559**	**0.2467**		**845.7370**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.5 Drainage/Utilities/Sub-Grade - 2016

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	0.9482	8.7147	6.2987	8.2400e-003		0.6743	0.6743		0.6212	0.6212	0.0000	840.5559	840.5559	0.2467		845.7370
Total	**0.9482**	**8.7147**	**6.2987**	**8.2400e-003**		**0.6743**	**0.6743**		**0.6212**	**0.6212**	**0.0000**	**840.5559**	**840.5559**	**0.2467**		**845.7370**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.6 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	8.3688	87.3087	48.6195	0.0943		4.4195	4.4195		4.1215	4.1215		9,679.1623	9,679.1623	2.6768		9,735.3742
Total	**8.3688**	**87.3087**	**48.6195**	**0.0943**		**4.4195**	**4.4195**		**4.1215**	**4.1215**		**9,679.1623**	**9,679.1623**	**2.6768**		**9,735.3742**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2191	1.9902	2.3361	5.0000e-003	0.1394	0.0301	0.1695	0.0398	0.0277	0.0674		501.0358	501.0358	3.8700e-003		501.1171
Worker	0.1713	0.2010	2.1922	5.1000e-003	0.4025	3.0200e-003	0.4055	0.1068	2.7800e-003	0.1095		425.5807	425.5807	0.0213		426.0284
Total	**0.3904**	**2.1912**	**4.5282**	**0.0101**	**0.5419**	**0.0331**	**0.5750**	**0.1465**	**0.0305**	**0.1770**		**926.6164**	**926.6164**	**0.0252**		**927.1455**

3.6 Building Construction - 2016

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	8.3688	87.3087	48.6195	0.0943		4.4195	4.4195		4.1215	4.1215	0.0000	9,679.1623	9,679.1623	2.6768		9,735.3742
Total	**8.3688**	**87.3087**	**48.6195**	**0.0943**		**4.4195**	**4.4195**		**4.1215**	**4.1215**	**0.0000**	**9,679.1623**	**9,679.1623**	**2.6768**		**9,735.3742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2191	1.9902	2.3361	5.0000e-003	0.1394	0.0301	0.1695	0.0398	0.0277	0.0674		501.0358	501.0358	3.8700e-003		501.1171
Worker	0.1713	0.2010	2.1922	5.1000e-003	0.4025	3.0200e-003	0.4055	0.1068	2.7800e-003	0.1095		425.5807	425.5807	0.0213		426.0284
Total	**0.3904**	**2.1912**	**4.5282**	**0.0101**	**0.5419**	**0.0331**	**0.5750**	**0.1465**	**0.0305**	**0.1770**		**926.6164**	**926.6164**	**0.0252**		**927.1455**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.7688	80.4020	46.8980	0.0942		4.0215	4.0215		3.7489	3.7489		9,540.2979	9,540.2979	2.6642		9,596.2468
Total	**7.7688**	**80.4020**	**46.8980**	**0.0942**		**4.0215**	**4.0215**		**3.7489**	**3.7489**		**9,540.2979**	**9,540.2979**	**2.6642**		**9,596.2468**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2008	1.7798	2.1927	4.9900e-003	0.1394	0.0261	0.1655	0.0398	0.0240	0.0638		492.5716	492.5716	3.6600e-003		492.6484
Worker	0.1557	0.1827	1.9827	5.1000e-003	0.4025	2.9300e-003	0.4055	0.1068	2.7000e-003	0.1095		409.1586	409.1586	0.0197		409.5728
Total	**0.3565**	**1.9624**	**4.1754**	**0.0101**	**0.5419**	**0.0291**	**0.5710**	**0.1465**	**0.0267**	**0.1733**		**901.7301**	**901.7301**	**0.0234**		**902.2213**

3.6 Building Construction - 2017

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	7.7688	80.4020	46.8980	0.0942		4.0215	4.0215		3.7489	3.7489	0.0000	9,540.2979	9,540.2979	2.6642		9,596.2468
Total	**7.7688**	**80.4020**	**46.8980**	**0.0942**		**4.0215**	**4.0215**		**3.7489**	**3.7489**	**0.0000**	**9,540.2979**	**9,540.2979**	**2.6642**		**9,596.2468**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2008	1.7798	2.1927	4.9900e-003	0.1394	0.0261	0.1655	0.0398	0.0240	0.0638		492.5716	492.5716	3.6600e-003		492.6484
Worker	0.1557	0.1827	1.9827	5.1000e-003	0.4025	2.9300e-003	0.4055	0.1068	2.7000e-003	0.1095		409.1586	409.1586	0.0197		409.5728
Total	**0.3565**	**1.9624**	**4.1754**	**0.0101**	**0.5419**	**0.0291**	**0.5710**	**0.1465**	**0.0267**	**0.1733**		**901.7301**	**901.7301**	**0.0234**		**902.2213**

3.7 Architectural Coatings - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**3.3362**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.7 Architectural Coatings - 2016

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	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**3.3362**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.7 Architectural Coatings - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**3.3000**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	**0.0318**	**0.0373**	**0.4046**	**1.0400e-003**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**83.5017**	**83.5017**	**4.0300e-003**		**83.5863**

3.7 Architectural Coatings - 2017

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	2.9677					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**3.3000**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	**0.0318**	**0.0373**	**0.4046**	**1.0400e-003**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**83.5017**	**83.5017**	**4.0300e-003**		**83.5863**

3.8 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5659	30.2205	17.7559	0.0275		1.4691	1.4691		1.3516	1.3516		2,852.3103	2,852.3103	0.8604		2,870.3778
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9487**	**30.2205**	**17.7559**	**0.0275**		**1.4691**	**1.4691**		**1.3516**	**1.3516**		**2,852.3103**	**2,852.3103**	**0.8604**		**2,870.3778**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.8 Paving - 2016

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	2.5659	30.2205	17.7559	0.0275		1.4691	1.4691		1.3516	1.3516	0.0000	2,852.3103	2,852.3103	0.8604		2,870.3778
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9487**	**30.2205**	**17.7559**	**0.0275**		**1.4691**	**1.4691**		**1.3516**	**1.3516**	**0.0000**	**2,852.3103**	**2,852.3103**	**0.8604**		**2,870.3778**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0350	0.0410	0.4474	1.0400e-003	0.0822	6.2000e-004	0.0828	0.0218	5.7000e-004	0.0224		86.8532	86.8532	4.3500e-003		86.9446
Total	**0.0350**	**0.0410**	**0.4474**	**1.0400e-003**	**0.0822**	**6.2000e-004**	**0.0828**	**0.0218**	**5.7000e-004**	**0.0224**		**86.8532**	**86.8532**	**4.3500e-003**		**86.9446**

3.8 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4200	28.0897	16.8577	0.0275		1.3715	1.3715		1.2617	1.2617		2,810.8148	2,810.8148	0.8612		2,828.9006
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8028**	**28.0897**	**16.8577**	**0.0275**		**1.3715**	**1.3715**		**1.2617**	**1.2617**		**2,810.8148**	**2,810.8148**	**0.8612**		**2,828.9006**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	**0.0318**	**0.0373**	**0.4046**	**1.0400e-003**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**83.5017**	**83.5017**	**4.0300e-003**		**83.5863**

3.8 Paving - 2017

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	2.4200	28.0897	16.8577	0.0275		1.3715	1.3715		1.2617	1.2617	0.0000	2,810.8148	2,810.8148	0.8612		2,828.9006
Paving	0.3828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.8028**	**28.0897**	**16.8577**	**0.0275**		**1.3715**	**1.3715**		**1.2617**	**1.2617**	**0.0000**	**2,810.8148**	**2,810.8148**	**0.8612**		**2,828.9006**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	**0.0318**	**0.0373**	**0.4046**	**1.0400e-003**	**0.0822**	**6.0000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**83.5017**	**83.5017**	**4.0300e-003**		**83.5863**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26.3925	33.3198	172.9175	0.2452	15.5367	0.3896	15.9263	4.1473	0.3576	4.5049		21,941.0024	21,941.0024	1.1303		21,964.7390
Unmitigated	26.3925	33.3198	172.9175	0.2452	15.5367	0.3896	15.9263	4.1473	0.3576	4.5049		21,941.0024	21,941.0024	1.1303		21,964.7390

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	2,080.00	2,080.00	2080.00	1,541,875	1,541,875
Parking Lot	0.00	0.00	0.00		
Supermarket	6,525.00	6,525.00	6525.00	5,802,369	5,802,369
Total	8,605.00	8,605.00	8,605.00	7,344,244	7,344,244

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	5.80	5.80	5.80	2.20	78.80	19.00	29	21	50
Parking Lot	5.80	5.80	5.80	0.00	0.00	0.00	0	0	0
Supermarket	5.80	5.80	5.80	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.509603	0.073619	0.192430	0.134105	0.036943	0.005309	0.012459	0.020989	0.001832	0.002087	0.006541	0.000614	0.003471

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496
NaturalGas Unmitigated	0.0496	0.4510	0.3788	2.7100e-003		0.0343	0.0343		0.0343	0.0343		541.1562	541.1562	0.0104	9.9200e-003	544.4496

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	3054.53	0.0329	0.2995	0.2516	1.8000e-003		0.0228	0.0228		0.0228	0.0228		359.3570	359.3570	6.8900e-003	6.5900e-003	361.5440
Fast Food Restaurant with Drive Thru	1545.29	0.0167	0.1515	0.1273	9.1000e-004		0.0115	0.0115		0.0115	0.0115		181.7992	181.7992	3.4800e-003	3.3300e-003	182.9056
Total		**0.0496**	**0.4510**	**0.3788**	**2.7100e-003**		**0.0343**	**0.0343**		**0.0343**	**0.0343**		**541.1562**	**541.1562**	**0.0104**	**9.9200e-003**	**544.4496**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	3.05453	0.0329	0.2995	0.2516	1.8000e-003		0.0228	0.0228		0.0228	0.0228		359.3570	359.3570	6.8900e-003	6.5900e-003	361.5440
Fast Food Restaurant with Drive Thru	1.54529	0.0167	0.1515	0.1273	9.1000e-004		0.0115	0.0115		0.0115	0.0115		181.7992	181.7992	3.4800e-003	3.3300e-003	182.9056
Total		**0.0496**	**0.4510**	**0.3788**	**2.7100e-003**		**0.0343**	**0.0343**		**0.0343**	**0.0343**		**541.1562**	**541.1562**	**0.0104**	**9.9200e-003**	**544.4496**

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	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Unmitigated	3.6385	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114

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	0.1870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Total	**3.6385**	**5.0000e-005**	**5.1300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0108**	**0.0108**	**3.0000e-005**		**0.0114**

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	0.1870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4510					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.1300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0108	0.0108	3.0000e-005		0.0114
Total	**3.6385**	**5.0000e-005**	**5.1300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0108**	**0.0108**	**3.0000e-005**		**0.0114**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

ATTACHMENT 2

CALINE4 Output Files

THIS PAGE IS INTENTIONALLY BLANK.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - Brdway & Mission 2016 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	1057	8.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	946	8.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	707	8.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	614	8.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	357	8.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	364	8.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	170	8.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	367	8.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491434	******	1.8
2. R_002	491445	******	1.8
3. R_003	491467	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - Brdway & Mission 2016 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	149.	4.9	0.4	0.8	0.2	0.0	0.1	0.0	0.0	0.2
2. R_002	347.	4.8	0.9	0.1	0.0	0.2	0.2	0.0	0.0	0.1
3. R_003	168.	4.6	0.0	0.4	0.6	0.2	0.0	0.1	0.1	0.0
4. R_004	324.	4.7	0.5	0.0	0.2	0.4	0.0	0.2	0.1	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - Brdway & Mission 2016 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	897	8.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	856	8.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	1043	8.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	1270	8.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	915	8.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	811	8.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	650	8.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	568	8.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491434	******	1.8
2. R_002	491445	******	1.8
3. R_003	491467	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - Brdway & Mission 2016 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	79.	5.2	0.4	0.0	0.0	0.4	0.0	0.4	0.6	0.2
2. R_002	62.	5.3	0.0	0.4	0.3	0.0	0.4	0.8	0.2	0.0
3. R_003	166.	5.4	0.0	0.3	0.9	0.4	0.0	0.3	0.3	0.0
4. R_004	328.	5.5	0.3	0.0	0.3	1.1	0.0	0.4	0.2	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - Brdway & Mission 2035 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	1168	5.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	1033	5.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	870	5.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	998	5.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	469	5.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	419	5.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	1080	5.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	1137	5.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491434	******	1.8
2. R_002	491445	******	1.8
3. R_003	491467	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - Brdway & Mission 2035 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	75.	4.9	0.3	0.0	0.0	0.2	0.0	0.1	0.7	0.3
2. R_002	349.	4.5	0.6	0.1	0.0	0.3	0.1	0.0	0.0	0.2
3. R_003	243.	4.9	0.2	0.0	0.0	0.3	0.1	0.0	0.3	0.8
4. R_004	325.	4.6	0.3	0.0	0.2	0.5	0.0	0.1	0.2	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 -Brdway & Mission 2035 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	982	5.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	866	5.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	1436	5.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	1693	5.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	1215	5.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	1164	5.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	694	5.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	604	5.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491434	******	1.8
2. R_002	491445	******	1.8
3. R_003	491467	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 -Brdway & Mission 2035 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	80.	4.7	0.3	0.0	0.0	0.3	0.0	0.3	0.4	0.2
2. R_002	63.	4.9	0.0	0.3	0.2	0.0	0.3	0.7	0.1	0.0
3. R_003	164.	5.0	0.0	0.1	0.8	0.4	0.0	0.2	0.2	0.0
4. R_004	331.	5.2	0.1	0.0	0.3	1.1	0.0	0.4	0.1	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - CCP & Mission 2016 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	1255	8.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	919	8.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	618	8.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	866	8.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	484	8.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	458	8.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	828	8.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	942	8.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491435	******	1.8
2. R_002	491445	******	1.8
3. R_003	491466	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - CCP & Mission 2016 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	77.	5.5	0.6	0.0	0.0	0.3	0.0	0.2	0.8	0.3
2. R_002	347.	5.3	1.0	0.1	0.0	0.3	0.2	0.0	0.0	0.3
3. R_003	242.	5.5	0.4	0.0	0.0	0.4	0.3	0.0	0.2	1.0
4. R_004	324.	5.1	0.6	0.0	0.2	0.6	0.0	0.2	0.3	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - CCP & Mission 2016 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	973	8.4	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	744	8.4	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	857	8.4	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	1337	8.4	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	1064	8.4	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	890	8.4	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	773	8.4	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	696	8.4	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491435	******	1.8
2. R_002	491445	******	1.8
3. R_003	491466	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - CCP & Mission 2016 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	79.	5.5	0.5	0.0	0.0	0.4	0.0	0.5	0.7	0.3
2. R_002	62.	5.6	0.0	0.3	0.2	0.0	0.5	0.8	0.5	0.0
3. R_003	241.	5.7	0.3	0.0	0.0	0.6	0.6	0.0	0.2	0.7
4. R_004	328.	5.7	0.3	0.0	0.3	1.2	0.0	0.4	0.3	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - CCP & Mission 2035 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	973	2.7	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	733	2.7	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	846	2.7	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	1337	2.7	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	1045	2.7	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	860	2.7	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	743	2.7	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	677	2.7	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491435	******	1.8
2. R_002	491445	******	1.8
3. R_003	491466	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - CCP & Mission 2035 AM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	79.	4.0	0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.1
2. R_002	62.	4.0	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.0
3. R_003	241.	4.0	0.1	0.0	0.0	0.2	0.2	0.0	0.1	0.2
4. R_004	328.	4.0	0.1	0.0	0.1	0.4	0.0	0.1	0.1	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374 - CCP & Mission 2035 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.9 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	973	2.7	0.0	20.0
B. Link_2	*****	*****	*****	*****	AG	733	2.7	0.0	20.0
C. Link_3	*****	*****	*****	*****	AG	846	2.7	0.0	20.0
D. Link_4	*****	*****	*****	*****	AG	1337	2.7	0.0	20.0
E. Link_5	*****	*****	*****	*****	AG	1045	2.7	0.0	18.0
F. Link_6	*****	*****	*****	*****	AG	860	2.7	0.0	18.0
G. Link_7	*****	*****	*****	*****	AG	743	2.7	0.0	18.0
H. Link_8	*****	*****	*****	*****	AG	677	2.7	0.0	18.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491435	******	1.8
2. R_002	491445	******	1.8
3. R_003	491466	******	1.8
4. R_004	491478	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374 - CCP & Mission 2035 PM
RUN: CALINE4 RUN (WORST CASE ANGLE)

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	79.	4.0	0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.1
2. R_002	62.	4.0	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.0
3. R_003	241.	4.0	0.1	0.0	0.0	0.2	0.2	0.0	0.1	0.2
4. R_004	328.	4.0	0.1	0.0	0.1	0.4	0.0	0.1	0.1	0.0

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374-Centerpointe-SR-78&Broadway_PM
RUN: 2035 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	1730	2.2	0.0	27.3
B. Link_2	*****	*****	*****	*****	AG	3075	2.2	0.0	20.6
C. Link_3	*****	*****	*****	*****	AG	1440	2.2	0.0	27.3
D. Link_4	*****	*****	*****	*****	AG	470	2.2	0.0	17.0
E. Link_5	*****	*****	*****	*****	AG	1624	2.2	0.0	24.9
F. Link_6	*****	*****	*****	*****	AG	1133	2.2	0.0	15.8
G. Link_7	*****	*****	*****	*****	AG	905	2.2	0.0	17.6
H. Link_8	*****	*****	*****	*****	AG	1021	2.2	0.0	14.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491938	******	1.8
2. R_002	491951	******	1.8
3. R_003	491930	******	1.8
4. R_004	491915	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374-Centerpointe-SR-78&Broadway_PM
RUN: 2035 (WORST CASE ANGLE)
Page 1

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	234.	4.2	0.1	0.6	0.0	0.0	0.0	0.1	0.1	0.0
2. R_002	256.	4.0	0.0	0.3	0.2	0.0	0.1	0.0	0.0	0.1
3. R_003	349.	4.1	0.0	0.2	0.1	0.0	0.0	0.2	0.2	0.2
4. R_004	155.	4.3	0.0	0.4	0.1	0.0	0.2	0.0	0.1	0.3

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374-Centerpointe-SR-78&Broadway_AM
RUN: Opening Year (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	* LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	* *****	*****	*****	*****	* AG	1306	4.2	0.0	27.3
B. Link_2	* *****	*****	*****	*****	* AG	1874	4.2	0.0	20.6
C. Link_3	* *****	*****	*****	*****	* AG	1600	4.2	0.0	27.3
D. Link_4	* *****	*****	*****	*****	* AG	741	4.2	0.0	17.0
E. Link_5	* *****	*****	*****	*****	* AG	736	4.2	0.0	24.9
F. Link_6	* *****	*****	*****	*****	* AG	666	4.2	0.0	15.8
G. Link_7	* *****	*****	*****	*****	* AG	795	4.2	0.0	17.6
H. Link_8	* *****	*****	*****	*****	* AG	1156	4.2	0.0	14.5

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M) X	Y	Z
1. R_001	* 491938	******	1.8
2. R_002	* 491951	******	1.8
3. R_003	* 491930	******	1.8
4. R_004	* 491915	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374-Centerpointe-SR-78&Broadway_AM
RUN: Opening Year (WORST CASE ANGLE)
Page 1

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	233.	4.6	0.1	0.8	0.1	0.0	0.0	0.2	0.1	0.0
2. R_002	255.	4.4	0.0	0.3	0.5	0.1	0.1	0.0	0.0	0.2
3. R_003	347.	4.7	0.0	0.2	0.3	0.0	0.0	0.2	0.3	0.4
4. R_004	156.	4.9	0.0	0.4	0.2	0.0	0.2	0.0	0.2	0.6

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374-Centerpointe-SR-78&Broadway_PM
RUN: Opening Year (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	1119	4.2	0.0	27.3
B. Link_2	*****	*****	*****	*****	AG	1991	4.2	0.0	20.6
C. Link_3	*****	*****	*****	*****	AG	2567	4.2	0.0	27.3
D. Link_4	*****	*****	*****	*****	AG	1519	4.2	0.0	17.0
E. Link_5	*****	*****	*****	*****	AG	1264	4.2	0.0	24.9
F. Link_6	*****	*****	*****	*****	AG	1279	4.2	0.0	15.8
G. Link_7	*****	*****	*****	*****	AG	846	4.2	0.0	17.6
H. Link_8	*****	*****	*****	*****	AG	1007	4.2	0.0	14.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491938	******	1.8
2. R_002	491951	******	1.8
3. R_003	491930	******	1.8
4. R_004	491915	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374-Centerpointe-SR-78&Broadway_PM
RUN: Opening Year (WORST CASE ANGLE)
Page 1

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	230.	4.9	0.1	0.7	0.3	0.0	0.0	0.3	0.1	0.0
2. R_002	254.	4.8	0.0	0.3	0.7	0.1	0.2	0.0	0.0	0.2
3. R_003	349.	5.0	0.0	0.2	0.4	0.0	0.0	0.4	0.3	0.3
4. R_004	155.	5.1	0.0	0.4	0.3	0.0	0.3	0.0	0.2	0.5

1
EXIT

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: 7374-Centerpointe-SR-78&Broadway_AM
RUN: 2035 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	0.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	3.2 PPM		
SIGTH=	5. DEGREES	TEMP=	8.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link_1	*****	*****	*****	*****	AG	3547	2.2	0.0	27.3
B. Link_2	*****	*****	*****	*****	AG	5564	2.2	0.0	20.6
C. Link_3	*****	*****	*****	*****	AG	1835	2.2	0.0	27.3
D. Link_4	*****	*****	*****	*****	AG	803	2.2	0.0	17.0
E. Link_5	*****	*****	*****	*****	AG	1709	2.2	0.0	24.9
F. Link_6	*****	*****	*****	*****	AG	717	2.2	0.0	15.8
G. Link_7	*****	*****	*****	*****	AG	1590	2.2	0.0	17.6
H. Link_8	*****	*****	*****	*****	AG	1597	2.2	0.0	14.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. R_001	491938	******	1.8
2. R_002	491951	******	1.8
3. R_003	491930	******	1.8
4. R_004	491915	******	1.8

1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: 7374-Centerpointe-SR-78&Broadway_AM
RUN: 2035 (WORST CASE ANGLE)
Page 1

POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. R_001	234.	4.7	0.2	1.0	0.1	0.0	0.0	0.1	0.1	0.0
2. R_002	257.	4.2	0.0	0.4	0.2	0.0	0.2	0.0	0.0	0.1
3. R_003	344.	4.4	0.0	0.3	0.2	0.0	0.0	0.1	0.4	0.3
4. R_004	155.	4.8	0.0	0.6	0.1	0.0	0.2	0.0	0.2	0.4

1
EXIT