AIR QUALITY AND GREENHOUSE GAS EMISSIONS ANALYSIS

IRWINDALE REGIONAL SHOPPING CENTER

CITY OF IRWINDALE

LOS ANGELES COUNTY, CALIFORNIA

LSA

December 22, 2014

AIR QUALITY AND GREENHOUSE GAS EMISSIONS ANALYSIS

IRWINDALE REGIONAL SHOPPING CENTER
CITY OF IRWINDALE
LOS ANGELES COUNTY, CALIFORNIA

Prepared for:

City of Irwindale
Community Development Department
Gus Romo, Community Development Director
Paula Kelly, Senior Planner and Project Manager
5050 North Irwindale Avenue
Irwindale, California 91706
(626) 430-2200

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. COI1401

LSA

December 22, 2014

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1
PROJECT DESCRIPTION 3
INTRODUCTION 3
PROJECT DESCRIPTION 3
Regional Project Location 3
Project Setting 5
Existing On-site Land Uses 5
Surrounding Land Uses 5
Local History 5
General Plan and Zoning Designations 6
Project Characteristics 6
Access and Circulation 6
Construction and Phasing 6
SETTING 8
REGIONAL AIR QUALITY 8
Climate/Meteorology 11
Description of Global Climate Change and Its Sources 13
Emissions Sources and Inventories 16
Air Pollution Constituents and Attainment Status 17
Hazardous Air Pollutants 19
LOCAL AIR QUALITY 20
REGULATORY SETTINGS 22
Federal Regulations/Standards 22
State Regulations/Standards 24
Regional Air Quality Planning Framework 31
Regional Air Quality Management Plan 31
THRESHOLDS OF SIGNIFICANCE 33
STATE THRESHOLDS OF SIGNIFICANCE 33
REGIONAL THRESHOLDS OF SIGNIFICANCE 33
Regional Thresholds for Construction Emissions 34
Regional Thresholds for Operational Emissions 34
Thresholds for Localized Impact Analysis 35
Thresholds for Global Climate Change 36
IMPACTS AND MITIGATION 39
CONSTRUCTION IMPACTS 39
Equipment Exhausts and Related Construction Activities 39
Fugitive Dust 40
Architectural Coatings 41
Localized Impacts Analysis 42
Odors 42
Naturally Occurring Asbestos (NOA) 43
Construction Emissions Conclusions 43
LONG-TERM REGIONAL AIR QUALITY IMPACTS 43
Long-Term Project Operational Emissions 43
Localized Impacts Analysis 45
Greenhouse Gas Emissions (GHG) 45

LONG-TERM MICROSCALE (CO HOT SPOT) ANALYSIS 52
AIR QUALITY MANAGEMENT PLAN CONSISTENCY 52
STANDARD CONDITIONS 53
Construction Operations 53
Operations 54
PROJECT FEATURES 54
Climate Change Impacts 54
MITIGATION MEASURES 55
Air Quality Impacts 55
Climate Change Impacts 56
CUMULATIVE IMPACTS 59
IMPACTS TO THE PROPOSED PROJECT FROM GLOBAL CLIMATE CHANGE 59
REFERENCES 60

FIGURES

Figure 1: Project Location 4
Figure 2: Conceptual Site Plan 7

TABLES

Table A: Ambient Air Quality Standards 9
Table B: Summary of Health Effects of the Major Criteria Air Pollutants 11
Table C: Global Warming Potential of Greenhouse Gases 15
Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin 17
Table E: Ambient Air Quality Monitored in the Project Vicinity 21
Table F: September 2010 ARB SB 375 Reduction Goals 29
Table G: Tentative Project Construction Schedule 40
Table H: Diesel Construction Equipment Utilized by Construction Phase 40
Table I: Short-Term Peak Daily Regional Construction Emissions for Phases 1 & 2 41
Table J: Construction Localized Impacts Analysis 42
Table K: Opening Year Regional Operational Emissions 44
Table L: Opening Year Regional Operational Emissions with Possible Mitigation 44
Table M: Long-Term Operational LST 45
Table N: Short-Term Regional Construction Emissions 46
Table O: Long-Term Operational Greenhouse Gas Emissions – As Proposed with Mitigation 47
Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies 49
Table Q: Long-Term Operational Greenhouse Gas Emissions – Business As Usual 51

APPENDIX

A: CALEEMOD MODEL PRINTOUTS

EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by the City of Irwindale to prepare an Air Quality and Greenhouse Gas Emissions Analysis (study)for the proposed Irwindale Regional Shopping Center project (proposed project), located in the City of Irwindale (City), in the County of Los Angeles (County), California.

The study provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality and greenhouse gas emissions. The report provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project. Modeled air quality levels are based upon trip generation rates developed in the project traffic study (LSA Associates, Inc., August 2014) for the proposed uses included in the project.

Regional emissions during project construction, calculated with the CalEEMod (Version 2013.2.2) model, would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures have been identified for short-term construction to meet the SCAQMD emissions thresholds. The proposed project would not exceed the localized significance thresholds (LSTs) during construction.

Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either State or federal ambient air quality standards (AAQS). The CO concentrations in the project area are much lower than the federal and State CO standards. The proposed project would not result in any significant increase in CO concentrations at intersections in the project vicinity. Therefore, project-related traffic would not significantly affect local CO levels under future year conditions, and the CO concentrations would be below the State and federal standards. No significant impact on local CO levels would occur. Criteria pollutant emissions from project operation, also calculated with the CalEEMod model, would exceed the SCAQMD daily thresholds for VOC, NO_X, and CO, while emissions of SO_X, PM_{10} and $PM_{2.5}$ would all be less than the SCAQMD daily thresholds. LSTs would not be exceeded by long-term emissions from the operation of the project. Thus, while the air quality impacts to the overall region would be significant, there would not be any health impacts to local residents from these emissions because of the distance and dispersion in the atmosphere preventing any of these emissions from creating concentrations above the safe levels defined in the ambient air quality standards.

The proposed project is located in Los Angeles County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small and less than significant.

The potential of the project to affect global climate change (GCC) is also included. Short-term construction and long-term operational emissions of the principal greenhouse gases (GHGs), including carbon dioxide (CO_2) and methane (CH_4), are quantified, and their significance relative to

the City's Climate Action Plan and Assembly Bill (AB) 32 is discussed. The proposed project would conflict with and impede implementation of reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor. Therefore, the project's contribution to cumulative GHG emissions would be significant.

The project site is zoned M-2 (Heavy Manufacturing) and has a General Plan designation of Commercial/Recreation. The project proposes a zone change amendment that would change the existing zoning from M-2 to C-2 (Heavy Commercial). The proposed project is consistent with the City General Plan as it only requires a zone change. The City General Plan is consistent with the Southern California Association of Governments (SCAG) Regional Comprehensive Plan (RCP) Guidelines and the SCAQMD Air Quality Management Plan (AQMP). Therefore, the proposed project is also consistent with the regional AQMP.

The evaluation was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the *SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook* (SCAQMD 1993) and associated updates. Air quality data posted on the California Air Resources Board (ARB) and the United States Environmental Protection Agency (EPA) websites are included to document the local air quality environment.

PROJECT DESCRIPTION

INTRODUCTION

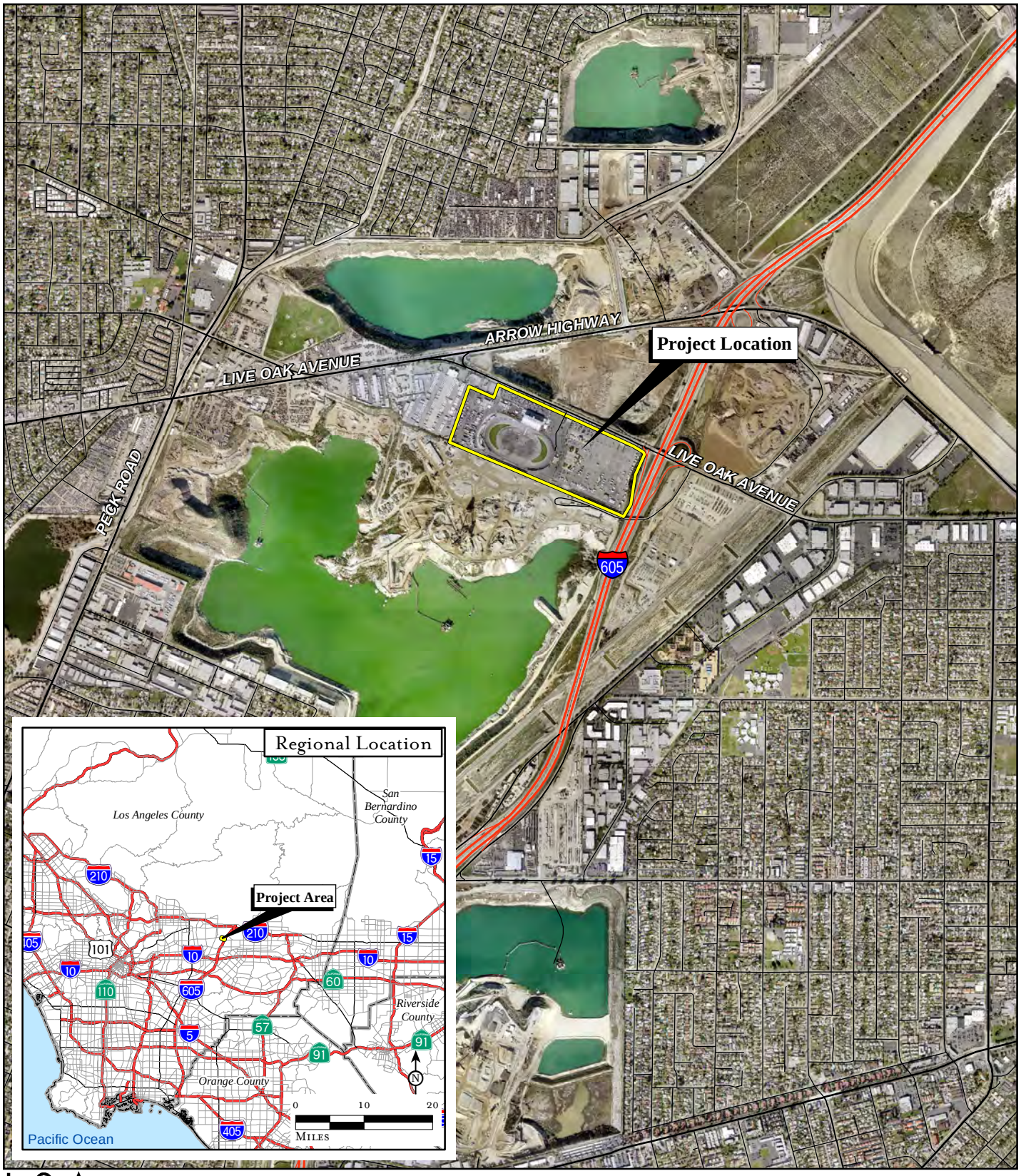
This air quality impact and greenhouse gas emissions analysis has been prepared to evaluate the potential air quality impacts and mitigation measures associated with the proposed project in the City of Irwindale in Los Angeles County, California. This report provides a project-specific air quality impact analysis by examining the impacts of the proposed uses on adjacent sensitive uses, as well as the impacts on the proposed uses on the project site, and evaluating the mitigation measures required as part of the project design. Guidelines identified by the SCAQMD in its *CEQA Air Quality Handbook* (SCAQMD, April 1993) and associated updates will be followed in this air quality impact analysis.

PROJECT DESCRIPTION

Regional Project Location

The project area is generally located west of Interstate 605 (I-605), south of Interstate 210 (I-210) and north of Interstate 10 (I-10) in the northwestern portion of the City of Irwindale in Los Angeles County. Figure 1 depicts the location of the proposed project within the region and the City of Irwindale. The project site is specifically located at the southwest corner of the I-605/Live Oak Avenue interchange approximately 750 feet east of Arrow Highway and is currently occupied by the Irwindale Event Center (aka Irwindale Speedway) with an address of 500 Speedway Drive. The project site consists of three parcels of land identified as Assessor's Parcel Numbers (APNs) 8532-004-022, 8532-004-025, and 8532-004-026 totaling approximately 63.5 acres. The project site is bordered by Live Oak Avenue and a landfill to the north, an active quarry to the south, I-605 to the east, and a trucking and distribution center to the west.

The project area is located in portions of Sections 12 of Township 1 South, Range 11 West, as depicted on the U.S. Geological Survey (USGS) 7.5-minute series El Monte, California quadrangle (latitude 34° 06' 35" north and longitude 117° 59' 16" west).



LSA

FIGURE 1

N

0 1,000 2,000

Feet

SOURCE: LARIAC, 2012; Thomas Bros., 2009

Irwindale Regional Shopping Center
Air Quality and
Greenhouse Gas Emissions Analysis

Regional and Project Location

I:\COI1401\Reports\AirQuality_GHG\fig1_RegLoc.mxd (8/26/2014)

Project Setting

The project site is generally level and fully developed with the Irwindale Speedway. Soils within the proposed project consist primarily of Hanford Silt Loam and Tujunga Fine Sandy Loam. The soil on site has been disturbed and is unconsolidated materials with a mixture of natural soils and fill placed in various areas.

Existing On-site Land Uses

As indicated previously, the project site is currently developed with the Irwindale Speedway in the City of Irwindale. The project site is approximately 63.5 acres and is zoned M-2 (Heavy Manufacturing) and is relatively flat. The General Plan land use designation for the site is Commercial/Recreation.

The project site consists entirely of urban/developed uses, which include vast human disturbance associated with the existing use. The project area includes roads, buildings and structures, pavement, and concrete. The project site is not associated with any native vegetation and provides only limited habitat value, primarily as cover, nesting, and perching opportunities for birds and common terrestrial wildlife that have adapted to urban, and other disturbed areas associated with human activity.

Surrounding Land Uses

The project surroundings consist of General Plan land use designations of Industrial/Business Park, Quarry Overlay, and Regional Commercial and related zoning of M-2 and C-2 (Heavy Commercial). Water features in the area include the Santa Fe Dam approximately 0.8 mile northeast of the project site, and the San Gabriel River approximately 0.25 mile east of the project site. The project site is bordered by Live Oak Avenue and landfill to the north, an active quarry and Graham Access Road to the south, I-605 to the east, and a truck distribution center to the west. Northwest and south of the project site are two very large mining pits that are generally filled with groundwater and runoff. Beyond the adjacent land uses are residential neighborhoods. Olive Junior High School and Walnut Elementary School are approximately 0.5 mile southeast of the project site.

Local History

The project site is located in the City of Irwindale. Prior to the Speedway, the project site was used as an outdoor swap meet for several years and, prior to the swap meet, a landfill. Prior to the landfill, sand and gravel for construction was mined on site as part of the former Pacific Rock Quarry that operated through the late 1960s. The quarry was backfilled as part of the former Nu-Way Landfill from the mid-1970s to May 1993 with approximately 200 vertical feet of fill, composed of soils and non-hazardous demolition debris. The fill consists of silty sand, clayey silt, and sandy silt plus asphalt concrete, brick fragments, concerted plastic, metallic wire, and wood. The underlying fill may also include vehicles and tires.

The Irwindale Speedway was opened in 1999 and includes a one-half oval, third-mile oval, and a one-eighth mile drag strip. The speedway includes a large parking area that can accommodate over 3,000 cars, stadium lighting around the track, perimeter landscaping, and 6,000 stadium-style bleacher seats. The Speedway also includes ancillary administration and concessions buildings east of the grandstands and repair and service structures west of the racetrack. The facility is used nearly every day for race training, fire and police training, filming of commercials, television programming, and

for racing. The eastern portion of the project site is also used for swap meets, special event operations, and vehicle and trailer shows. Irwindale Speedway, LLC declared bankruptcy after the 2011 season and vacated the property in early 2012. The previous owner, Nu-Way Industries, and the existing Irwindale Event Center operator, 211 Enterprises, entered into a partnership shortly after the bankruptcy so that drag racing and other activities could take place in 2012. NASCAR racing returned in 2013. The project site was purchased by the current owner and project applicant, Lindom Company in 2013. The existing lease permitting 211 Enterprises to operate the Irwindale Event Center will continue through at least December 2014.

General Plan and Zoning Designations

As identified in the City of Irwindale's General Plan, the City designates the entire project site as Commercial/Recreation. The site is zoned M-2 Heavy Manufacturing. The area immediately north has a land use designation of Regional Commercial; to the east and west Industrial/Business Park; and to the south Quarry Overlay.

Project Characteristics

The project site is approximately 63.5 acres in size. The proposed project includes the construction and occupancy of an approximately 700,000-square foot shopping center and associated parking. In addition to the primary function of the shopping center to provide commercial space for shopping opportunities, the project includes ancillary amenities including a central plaza for public gatherings, entryway features, an outdoor entertainment/performance area, and a food court. The proposed project will include related improvements, including, but not limited to parking, landscape planters, fencing, and walls.

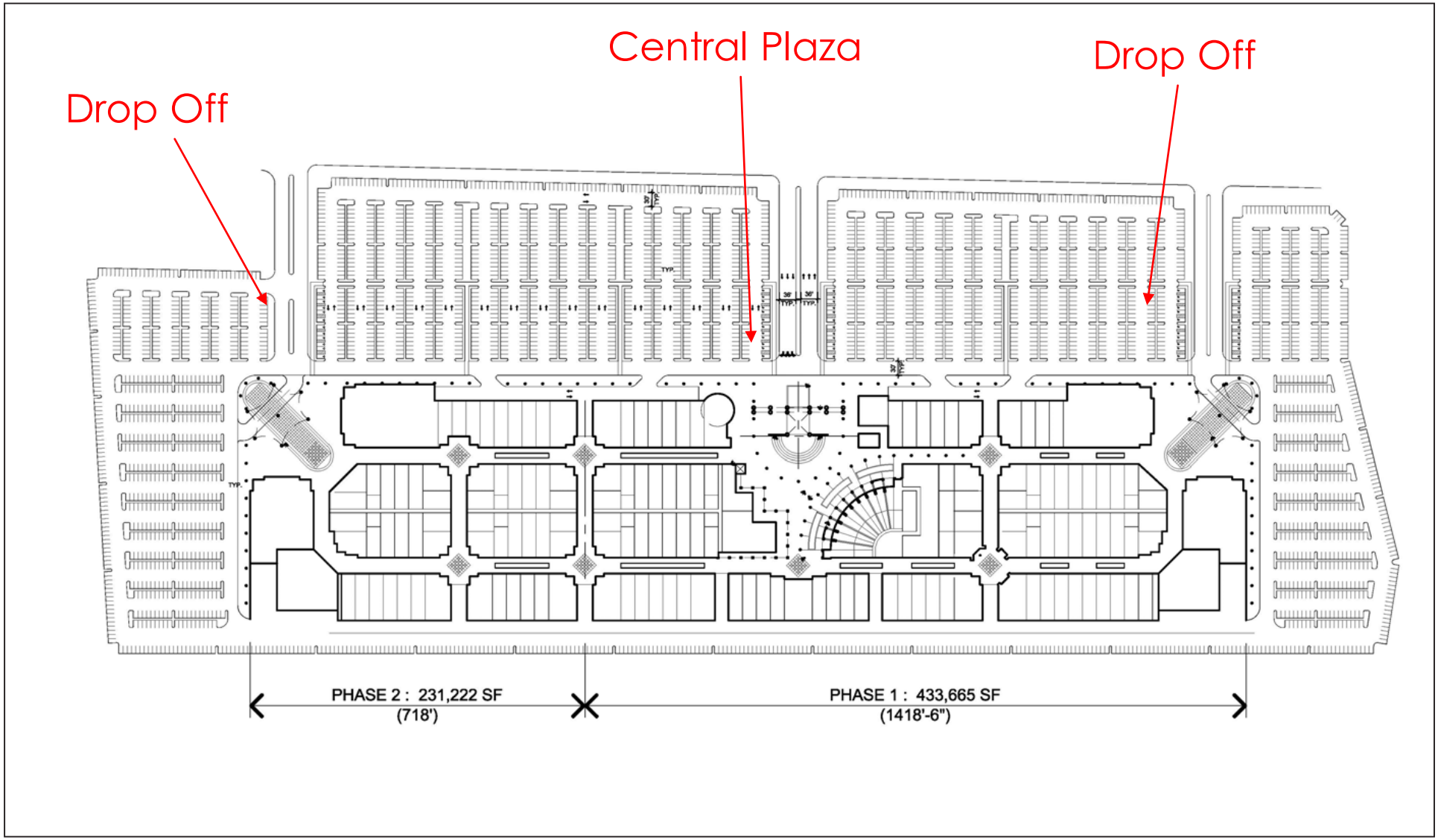
Figure 2 illustrates the proposed conceptual site plan. The shopping center is expected to employ approximately 5,000 people. Regular hours of operation of the shopping center are expected to be Monday through Saturday from 10 a.m. to 9 p.m. and Sundays from 10 a.m. to 7 p.m. It is anticipated that extended hours of operation will occur during holidays.

Access and Circulation

Access to the site would be from three driveways on Live Oak Avenue. Parking for customers and employees would exist on all sides of the proposed shopping center.

Construction and Phasing

The project would be completed in two phases. Phase 1 of the project would start in early 2015 and be completed in fall 2017 and would include demolition of the speedway and associated buildings, all site preparation and grading, and would develop approximately 455,000 square feet or 65 percent of the total project building space. Phase 2 would start in winter of 2017 and be completed in the fall of 2018 and would develop approximately 245,000 square feet or 35 percent of the total project space. Concrete, asphalt, and other acceptable demolition debris would be used on site as fill within the racetrack oval as well as other portions of the project as deemed necessary for proper preparation of the site's foundations.



LSA

FIGURE 2

Irwindale Regional Shopping Center

Site Plan

SOURCE: FCGA Architecture, 2014

I:\COI1401\Reports\General\fig2_SitePlan.cdr (08/27/2014)

SETTING

REGIONAL AIR QUALITY

The project site is located in Los Angeles County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD. The air quality assessment for the proposed project includes estimating emissions associated with short-term construction and long-term operation of the proposed project.

A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, included in its *CEQA Air Quality Handbook* (April 1993) and associated updates, were adhered to in the assessment of air quality impacts for the proposed project.

Both the State of California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table A, these pollutants include ozone (O_3), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State of California has established a set of episode criteria for O_3, CO, NO_2, SO_2, and PM_{10}. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant alert levels is reached at any monitoring site and meteorological conditions are such that the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase; or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- **O_3:** 392 micrograms per cubic meter ($\mu g/m^3$) (0.20 parts per million [ppm]), 1-hour average
- **CO:** 17 milligrams per cubic meter (mg/m^3) (15 ppm), 8-hour average
- **NO_2:** 1,130 $\mu g/m^3$ (0.6 ppm), 1-hour average; 282 $\mu g/m^3$ (0.15 ppm), 24-hour average
- **SO_2:** 800 $\mu g/m^3$ (0.3 ppm), 24-hour average
- **Particulates, measured as PM_{10}:** 350 $\mu g/m^3$, 24-hour average

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 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	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm(40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	—
Nitrogen Dioxide (NO_2)[9]	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	—	
Sulfur Dioxide (SO_2)[10]	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (for certain areas)[9]	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[9]	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	—	
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	Same as Primary Standard	
	Rolling 3-Month Average[11]	—		0.15 µg/m^3		
Visibility-Reducing Particles[13]	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
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 Chromatography			

Source: California Air Resources Board (June 4, 2013).

Footnotes:

1 California standards for O_3; CO (except Lake Tahoe); SO_2 (1- and 24-hour); NO_2; suspended 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 O_3, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 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 $\mu g/m^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current Federal policies.

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

[4] Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

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

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

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

[8] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ 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 standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard 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, the 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 1 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 $\mu g/m^3$ as a quarterly average) remains in effect until 1 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 standards 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 Basins, respectively.

°C = degrees Celsius
ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Table B lists the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, O_3 and particulate matter ($PM_{2.5}$ and PM_{10}) are considered regional pollutants, while the others have more localized effects.

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Health Effects	Examples of Sources
Particulate matter (PM_{10}: less than or equal to 10 microns)	• Increased respiratory disease • Lung damage • Premature death	• Cars and trucks, especially diesels • Fireplaces, wood stoves • Windblown dust from roadways, agriculture, and construction
Ozone (O_3)	• Breathing difficulties • Lung damage	Formed by chemical reactions of air pollutants in the presence of sunlight; common sources are motor vehicles, industries, and consumer products
Carbon monoxide (CO)	• Chest pain in heart patients • Headaches, nausea • Reduced mental alertness • Death at very high levels	Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen dioxide (NO_2)	Lung damage	See carbon monoxide sources
Toxic air contaminants	• Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders	• Cars and trucks, especially diesels • Industrial sources such as chrome platers • Neighborhood businesses such as dry cleaners and service stations • Building materials and products

Source: California Air Resources Board (2010).

The California Clean Air Act (CCAA) provides SCAQMD and other air districts with the authority to manage transportation activities at indirect sources. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. Examples of this would be the motor vehicles at an intersection, a mall, and on highways. The SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the ARB.

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (mobile and industry, etc.), but also by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the Basin the worst air pollution problem in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site with complete temperature and rainfall records is the San

Gabriel Fire Dept. station, which provides sufficient data for average temperatures in the project area. The San Gabriel Fire Dept. station[1] shows that the monthly average maximum temperature recorded from May 1939 to March 2013 ranged from 69.1°F in January to 89.7°F in August, with an annual average maximum of 78.4°F. The monthly average minimum temperature recorded at this station ranged from 41.9°F in January to 61.6°F in August, with an annual average minimum of 51.3°F. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The San Gabriel Fire Dept. station monitored precipitation as well. Average monthly rainfall during that period varied from 3.69 inches in January to 0.57 inch or less from May to October, with an annual total of 17.20 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the vicinity of the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

[1] Western Regional Climate Center. Website: www.wrcc.dri.edu.

Description of Global Climate Change and Its Sources

Global climate change (GCC) is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors, such as changes in the sun's intensity; natural processes within the climate system, such as changes in ocean circulation; or human activities, such as the burning of fossil fuels, land clearing, or agriculture. The primary observed effect of GCC has been a rise in the average global tropospheric[1] temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California's coastline, and seawater intrusion in the Delta.

Global surface temperatures have risen by 1.33°F ± 0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[2] The latest projections, based on state-of-the art climate models, indicate that temperatures in California are expected to rise 3–10.5°F by the end of the century.[3] The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[4] Increased amounts of CO_2 and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[5]

---

1 The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

2 Intergovernmental Panel on Climate Change (IPCC), 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.*

3 California Climate Change Center, 2006. *Our Changing Climate. Assessing the Risks to California.* July.

4 IPCC, *Climate Change 2007: The Physical Science Basis,* http://www.ipcc.ch.

5 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, GHGs like CO_2, CH_4, and N_2O in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHG results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[1]

- CO_2
- CH_4
- N_2O
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While GHGs produced by human activities include naturally occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6, are completely new to the atmosphere. Certain other gases, such as water vapor, are short-lived in the atmosphere as compared to these GHGs that remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality study, the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of metric tons (MT)[2] of "CO_2 equivalents" (CO_2e). Table C shows the GWPs for each type of GHG analyzed in this report. For example, N_2O is 265 times more potent at contributing to global warming than CO_2.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and

[1] The GHGs listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505), as discussed later in this section.

[2] A metric ton is equivalent to approximately 1.1 tons.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	~100	1
Methane (CH_4)	12	28
Nitrous Oxide (N_2O)	121	265

Source: California Air Resources Board, *First Update to the Climate Change Scoping Plan: Building on the Framework* (May 2014).
HFC = hydrofluorocarbons
IPCC = Intergovernmental Panel on Climate Change
PFC = perfluorocarbons

deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of human-made CO_2. Consequently, the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen approximately 30 percent since the late 1800s.[1]

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (burning of coal, oil, natural gas, etc.). Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California, followed by enteric fermentation (emissions from the digestive processes of livestock).[2] Agricultural processes such as manure management and rice cultivation are also significant sources of human-made CH_4 in California. CH_4 accounted for approximately 7 percent of gross climate change emissions (CO_2e) in California in 2009.[3] It is estimated that over 60 percent of global methane emissions are related to human-related activities.[4] As with CO_2, the major removal process of atmospheric CH_4—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is a product of the reaction that occurs between nitrogen and oxygen during

1 California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* March.
2 California Air Resources Board (ARB), Greenhouse Gas Inventory Data - 2000 to 2009. http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed November 2012.
3 Ibid.
4 California Air Resources Board (ARB), Greenhouse Gas Inventory Data – 2000 to 2011. Website: http://www.arb.ca.gov/cc/inventory/data/data.htm (accessed April 2014).

fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control devices used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for nearly 7 percent of human-made GHG emissions (CO_2e) in California in 2002.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for O_3-depleting substances regulated under the Montreal Protocol.[1] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry, which is active in California, leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 3.5 percent of human made GHG emissions (CO_2e) in California in 2002.[2]

Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, national, California, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (see Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions. Worldwide emissions of GHGs in 2011 totaled 34.6 billion MT of CO_2e per year (CO_2e/yr).[3] Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2012, the United States emitted approximately 6.5 billion MT of CO_2e, down from 7.3 billion MT in 2007. Of the six major sectors nationwide—electric power industry, transportation, industry, agriculture, commercial, and residential—the electric power industry and transportation sectors combined account for approximately 70 percent of the GHG emissions; the majority of the electric power industry and all of the transportation emissions are generated from direct fossil fuel combustion. In 2012, the total United States GHG emissions were approximately 5.3 percent greater than 1990 levels.[4]**State of California Emissions.** According to California ARB emission inventory estimates, California emitted approximately 448 MMT of CO_2e emissions in

1 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for O_3 depletion.

2 CalEPA. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

3 United Nations Framework Convention on Climate Change (UNFCCC). Combined total of Annex I and Non-Annex I Country CO_2e emissions. 2014. *Greenhouse Gas Inventory Data.* Website: http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php (accessed April 2014).

4 United States Environmental Protection Agency (EPA). 2014. The 2014 U.S. Greenhouse Gas Inventory Report. Website: http://www.epa.gov/climatechange/emissions/usinventoryreport.html (accessed April 2014).

2011.[1] This large number is due primarily to the sheer size of California compared to other states. By contrast, California has the fourth-lowest per-capita CO_2 emission rate from fossil fuel combustion in the country due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise.[2]

Air Pollution Constituents and Attainment Status

The ARB coordinates and oversees both State and federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	N/A
O_3 8-hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Nonattainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment[1]	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source : California Air Resources Board (2013) (http://www.arb.ca.gov/desig/desig.htm).
[1] Except in Los Angeles County.
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SO_2 = sulfur dioxide

Ozone. O_3 (smog) is formed by photochemical reactions between NO_X and reactive organic gases (ROGs) rather than being directly emitted. O_3 is a pungent, colorless gas typical of Southern

[1] ARB, Greenhouse Gas Inventory Data – 2000 to 2011. Website: http://www.arb.ca.gov/cc/inventory/data/data.htm (accessed April 2014).

[2] California Energy Commission (CEC), 2007. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 – Final Staff Report, publication # CEC-600-2006-013-sf, Sacramento, CA, December 22, 2006; and January 23, 2007, update to that report.

California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. O_3 levels peak during summer and early fall. The entire Basin is designated as a nonattainment area for the State 1-hour and 8-hour O_3 standards. The EPA has officially designated the status for most of the Basin regarding the 8-hour O_3 standard as "Extreme," which means the Basin has until 2024 to attain the federal 8-hour O_3 standard.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is in attainment for the State standards for CO. The Basin is designated as an "Attainment/Maintenance" area under the federal CO standards.

Nitrogen Oxides. NO_2, a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter ($PM_{2.5}$), poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the State NO_2 standard and as an "Attainment/Maintenance" area under the federal NO_2 standard.

Sulfur Dioxide. SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both the federal and State SO_2 standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles County portion of the Basin was redesignated as nonattainment for the State and federal standards for lead in 2010.

Particulate Matter. Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily among the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease

(in children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The Basin is designated nonattainment for the federal and State $PM_{2.5}$ standards and the State PM_{10} standard, and attainment/maintenance for the federal PM_{10} standard.

Volatile Organic Compounds. Volatile organic compounds (VOCs; also known as ROGs, and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, but are a prime component of the photochemical smog reaction. Consequently, VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower. There are no attainment designations for VOCs.

Sulfates. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Hydrogen Sulfide. H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance. The entire Basin is unclassified for the State standard of H_2S.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire Basin is unclassified for the State standard for visibility-reducing particles.

Hazardous Air Pollutants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in the State. 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. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code [USC] Section 7412[b]) is a TAC. Under State law, the California Environmental

Protection Agency (CalEPA), acting through the ARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. Once a TAC is identified, ARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings.

To date, the ARB has designated nearly 200 compounds as TACs. Additionally, the ARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (DPM).

LOCAL AIR QUALITY

The SCAQMD, together with the ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Azusa station, which monitors all criteria air pollutant data except SO_2. The air quality trends from this station are used to represent the ambient air quality in the project area. The pollutants monitored are CO, O_3, PM_{10}, $PM_{2.5}$, and NO_2.[1] The closest air quality monitoring station that monitors SO_2 is the Fontana station. The ambient air quality data in Table E show that NO_2, SO_2, 24-hour PM_{10}, and CO levels are below the applicable State and federal standards.

[1] Air quality data, 2011–2013; United States Environmental Protection Agency (EPA) and ARB websites.

Table E: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard		2011	2012	2013
Carbon Monoxide (CO) – 1-hour CO levels taken from EPA Website					
Maximum 1-hour concentration (ppm)			2.4	1.8	3.1
Number of days exceeded:	State:	> 20 ppm	0	0	0
	Federal:	> 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)			1.36	1.13	1.7
Number of days exceeded:	State:	≥ 9.0 ppm	0	0	0
	Federal:	≥ 9 ppm	0	0	0
Ozone (O_3)					
Maximum 1-hour concentration (ppm)			0.111	0.134	0.115
Number of days exceeded:	State:	> 0.09 ppm	13	18	7
Maximum 8-hour concentration (ppm)			0.092	0.095	0.085
Number of days exceeded:	State:	> 0.07 ppm	19	20	15
	Federal:	> 0.075 ppm	12[1]	10	6
Coarse Particulates (PM_{10})					
Maximum 24-hour concentration ($\mu g/m^3$)			65.0	78.0	76.0
Number of days exceeded:	State:	> 50 $\mu g/m^3$	8	6	6
	Federal:	> 150 $\mu g/m^3$	0	0	0
Annual arithmetic average concentration ($\mu g/m^3$)			31.9	29.6	32.3
Exceeded for the year:	State:	> 20 $\mu g/m^3$	Yes	Yes	Yes
Fine Particulates ($PM_{2.5}$)					
Maximum 24-hour concentration ($\mu g/m^3$)			94.6	39.6	29.6
Number of days exceeded:	Federal:	> 35 $\mu g/m^3$	2	1	0
Annual arithmetic average concentration ($\mu g/m^3$)			ND	ND	ND
Exceeded for the year:	State:	> 12 $\mu g/m^3$	ND	ND	ND
	Federal:	> 15 $\mu g/m^3$	ND	ND	ND
Nitrogen Dioxide (NO_2)					
Maximum 1-hour concentration (ppm)			0.0795	0.0718	0.0768
Number of days exceeded:	State:	> 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)			ND	0.019	0.017
Exceeded for the year:	State:	> 0.030 ppm	ND	No	No
	Federal:	> 0.053 ppm	ND	No	No
Sulfur Dioxide (SO_2) – taken from Fontana-Arrow Highway Station					
Maximum 24-hour concentration (ppm)			0.003	0.004	0.001
Number of days exceeded:	State:	> 0.04 ppm	0	0	0
	Federal:	> 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)			0.000	ND	ND
Exceeded for the year:	Federal:	> 0.030 ppm	0	ND	ND

Sources: United States Environmental Protection Agency and California Air Resources Board websites: www.epa.gov/air/data/index.html and www.arb.ca.gov/adam/welcome.html.

1 The exceedances of the federal 8-hour O_3 standard are based on the old 0.08 ppm standard. In April 2008, the EPA revised the standard to 0.075 ppm.

ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
ND = no data available
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million

The State 1-hour O_3 standard was exceeded 7 to 18 times per year in the past 3 years. The federal 8-hour O_3 standard was exceeded 6 to 12 days per year in the past 3 years, and the State 8-hour O_3 standard was exceeded 15 to 19 times per year in the past 3 years. The federal 24-hour $PM_{2.5}$ standards were exceeded 1 to 2 times per year in the past 3 years, and the federal annual average $PM_{2.5}$ standards were not measured at this monitoring station in the past 3 years. The State 24-hour PM_{10} standards were exceeded 6 to 8 times per year in the past 3 years. The State annual average PM_{10} standards were exceeded at this monitoring station every year in the past 3 years.

REGULATORY SETTINGS

Federal Regulations/Standards

Pursuant to the federal Clean Air Act of 1970 (CAA), the EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The EPA has designated the SCAG as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

In an effort to help federal agencies ensure the integrity of their environmental reviews and promote sound governmental decision making, the Council on Environmental Quality (CEQ) issued on January 14, 2011, final guidance on the "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact." This guidance was developed as part of CEQ's effort to modernize and reinvigorate federal agency implementation of the National Environmental Policy Act (NEPA).

The EPA established new national air quality standards for ground-level O_3 and $PM_{2.5}$ in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for O_3 and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the United States Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost as well as health benefits in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for O_3 and soot in 1997. Nevertheless, the court threw out the EPA's policy for implementing new O_3 rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level O_3 standard. The EPA issued the proposed rule implementing the 8-hour O_3 standard in April 2003. The EPA completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour O_3 standard on June 15, 2005, and lowered the 8-hour O_3 standard from 0.08 ppm to 0.075 ppm on April 1, 2008.

The EPA issued the final $PM_{2.5}$ implementation rule in fall 2004. The EPA lowered the 24-hour $PM_{2.5}$ standard from 65 to 35 $\mu g/m^3$ and revoked the annual PM_{10} standard on December 17, 2006. The EPA issued final designations for the 2006 24-hour $PM_{2.5}$ standard on December 12, 2008.

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 that are required to implement a regulatory approach to GCC.

On September 30, 2009, the EPA announced a proposal that focuses on large facilities emitting over 25,000 tons of GHG emissions per year. These facilities would be required to obtain permits that would demonstrate they are using the best practices and technologies to minimize GHG emissions.

On December 7, 2009, the EPA Administrator signed a final action with two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The Administrator is proposing to find that the current and projected concentrations of the mix of six key GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere constitute a threat to public health and welfare of current and future generations. This is referred to as the endangerment finding.
- The Administrator is further proposing to find that the combined emissions of CO_2, CH_4, N_2O, and HFCs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key GHGs and hence to the threat of GCC. This is referred to as the cause or contribute finding.

This EPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the GHG emission standards for light-duty vehicles mentioned below.

On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model years 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The EPA is finalizing the first-ever national GHG emissions standards under the CAA, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The EPA GHG standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg).

In October 2012 new fuel economy standards[1] for cars and light-duty trucks were adopted by the DOT and the EPA that will increase fuel economy to the equivalent of 54.5 mpg by model year 2025. When combined with previous standards, this will nearly double the fuel efficiency of those vehicles compared to new vehicles currently in use. The DOT and EPA are currently adopting amendments to

[1] http://www.nhtsa.gov/About+NHTSA/Press+Releases/2012/Obama+Administration+Finalizes+Historic+54.5+mpg+Fuel+Efficiency+Standards

the 2011 GHG emissions standards and fuel efficiency standards for medium- and heavy-duty engines and vehicles.

State Regulations/Standards

In 1967, the California Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish the ARB. Since its formation, the ARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

The ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter [DPM]) as TACs in August 1998. Following the identification process, the ARB was required by law to determine whether there is a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with DPM and to achieve goals of 75 percent DPM reduction by 2010 and 85 percent by 2020.

In 1988, AB 4420 directed the California Energy Commission (CEC) to report on "how global warming trends may affect California's energy supply and demand, economy, environment, agriculture, and water supplies" and offer "recommendations for avoiding, reducing and addressing the impacts."[1] This marked the first statutory direction to a California State agency to address climate change.

The California Climate Action Registry was created to encourage voluntary reporting and early reductions of greenhouse gas emissions with the adoption of Senate Bill (SB) 1771 in 2000. The CEC was directed to assist by developing metrics and identifying and qualifying third-party organizations to provide technical assistance and advice to greenhouse gas emission reporters. The next year, SB 527 amended SB 1771 to emphasize third-party verification.

SB 1711 also contained several additional requirements for the CEC including: updating the State's greenhouse gas inventory from an existing 1998 report, and continuing to update it every 5 years; acquiring, developing and distributing information on global climate change to agencies and businesses; establishing a State interagency task force to ensure policy coordination; and establishing a climate change advisory committee to make recommendations on the most equitable and efficient ways to implement climate change requirements. In 2006, AB 1803 transferred preparation of the inventory from the CEC to the ARB by AB 1803. The ARB updates the inventory annually.

AB 1493, authored by Assembly Member Fran Pavley in 2002, directed the ARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from motor vehicles. The so-called "Pavley" regulations, or Clean Car regulations, were approved by the ARB in 2004. The ARB submitted a request to the EPA to implement the regulations in December 2005. After several years of requests to the federal government, and accompanying litigation, this waiver request was granted on June 30, 2009. The ARB has since combined the control of smog-

[1] 2010 Climate Action Team Report – California Climate Action Milestones. Climate Action Team, December 2010.

causing pollutants and greenhouse gas emissions to develop a single coordinated package of standards known as Low Emission Vehicles III. It is expected that these regulations will reduce greenhouse gas emissions from California passenger vehicles by about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. AB 1493 also directed the California Climate Action Registry to adopt protocols for reporting reductions in greenhouse emissions from mobile sources prior to the operative date of the regulations.

SB 812 added forest management practices to the California Climate Action Registry members' reportable emissions actions. It also directed the Registry to adopt forestry procedures and protocols to monitor, estimate, calculate, report, and certify carbon stores and carbon dioxide emissions that resulted from the conservation and conservation-based management of forests in California.

Senate Bill 1078. Approved by Governor Davis in September 2002, Senate Bill (SB) 1078 established the Renewal Portfolio Standard program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010 (see SB 107 and Executive Order [EO] S-14-08).

In December 2004, Governor Arnold Schwarzenegger signed Executive Order (EO) S-20-04, which set a goal of reducing energy use in State-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encouraged cities, counties, schools, and the private sector to take all cost-effective measures to reduce building electricity use. This action built upon the State's strong history of energy efficiency efforts that have saved Californians and California businesses energy and money for decades. They are a cornerstone of greenhouse gas reduction efforts.

Executive Order S-3-05. In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in EO S-3-05. This EO established the following goals for the State of California: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of CalEPA is required to coordinate the efforts of various agencies in order to collectively and efficiently reduce GHGs.

Representatives from several state agencies compose the Climate Action Team, which is responsible for coordinating and implementing GHG emission reduction programs that fall outside of ARB's jurisdiction. The Climate Action Team fulfilled its report requirements through the March 2006 Climate Action Team Report to Governor Schwarzenegger and the legislature (California Environmental Protection Agency 2006) and has released subsequent reports for 2009 and 2010.

Assembly Bill 32. California's major initiative for reducing GHG emissions is outlined in AB 32, the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006. AB 32 required ARB to take the following steps:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions;
- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions of GHGs by January 1, 2011; and
- Prepare a Scoping Plan outlining the State's strategy to achieve the 2020 GHG emissions limit.

The ARB has established that the level of annual GHG emissions in 1990 was 427 $MMTCO_2e$.[1] The emissions target of 427 $MMTCO_2e$ requires the reduction of 80 $MMTCO_2e$ from the State's projected business-as-usual 2020 emissions of 507 $MMTCO_2e$[2] (i.e., the 1990 levels are approximately 16 percent below "business-as-usual"). "Business-as-usual" is a forecast of the California economy in 2020 without implementation of any of the GHG reduction measures identified in the Scoping Plan. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures.[3] More specifically, the Scoping Plan included aggressive energy efficiency goals and methods for increasing renewable energy use. Meeting the goals in the Scoping Plan required expanded utility-based energy efficiency programs, more stringent building and appliance standards, green building practices, waste reduction, and innovative strategies that went beyond traditional approaches. The Scoping Plan also relied on expanded efforts by the California Energy Commission (CEC) and California Public Utilities Commission (CPUC).

AB 32 requires that the Scoping Plan be updated at least every five years. The First Update to the Scoping Plan was approved by the Board on May 22, 2014, and builds upon the initial Scoping Plan with new strategies and recommendations. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments.

As part of the update to the Scoping Plan, the emissions reductions required to meet the 2020 statewide GHG emissions limit were further adjusted. The primary reason for adjusting the 2020 statewide emissions limit was based on the fact that the original Scoping Plan relied on the IPCC's 1996 Second Assessment Report (SAR) to assign the GWPs of greenhouse gases. Recently, in accordance the United Nations Framework Convention on Climate Change (UNFCCC), international climate agencies have agreed to begin using the scientifically updated GWP values in the IPCC's Fourth Assessment Report (AR4) that was released in 2007. Because ARB has begun to transition to the use of the AR4 100-year GWPs in its climate change programs, ARB recalculated the Scoping Plan's 1990 GHG emissions level with the AR4 GWPs. As the recalculation resulted in 431 $MMTCO_2e$, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 $MMTCO_2e$ in the 2014 Scoping Plan. Considering that the proposed update also

---

1 ARB. California 1990 Greenhouse Gas Emissions Level and 2020 Limit. Available at: http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm, last accessed August 2014.

2 ARB. Greenhouse Gas Inventory - 2020 Emissions Forecast. Available at: http://www.arb.ca.gov/cc/inventory/data/forecast.htm, last accessed August 2014.

3 ARB. 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework*. May.

adjusted the 2020 BAU (Business As Usual) forecast of GHG emissions to 509 $MMTCO_2e$, a 15% reduction below the estimated BAU levels was determined to be necessary to return to 1990 levels by 2020 (ARB, 2014b). BAU is defined as emissions that would be generated prior to AB 32-related emission restrictions beginning in 2006 (e.g., Pavley standards).

The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed ARB and the CAT[1] to identify a list of "discrete early action GHG reduction measures" that could be adopted and made enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed EO S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard. This EO set a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directed ARB to consider the Low Carbon Fuel Standard as a discrete early action measure. The ARB adopted the implementing regulation in April 2009. The regulation was expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard is anticipated to replace 20 percent of the fuel used in motor vehicles with alternative fuels by 2020.

In June 2007, ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture). The ARB adopted an additional six early action measures in October 2007.[2] These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF_6 reductions from the nonelectricity sector. The combination of early action measures is estimated to reduce statewide GHG emissions by nearly 16 MMT.[3]

Senate Bill 1368. In September 2006, Governor Schwarzenegger signed SB 1368, which requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local, publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC. This effort will help to protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California and requiring that the standards be developed and adopted in a public process.

---

1 CAT is a consortium of representatives from State agencies who have been charged with coordinating and implementing GHG emission reduction programs that fall outside of ARB's jurisdiction.

2 ARB. 2007. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

3 ARB. 2007. "ARB approves tripling of early action measures required under AB 32." News Release 07-46. http://www.arb.ca.gov/newsrel/nr102507.htm. October 25.

Senate Bill 97. To assist public agencies in analyzing the effects of GHGs under CEQA, SB 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to minimize and mitigate a project's GHG emissions. On December 30, 2009, the Natural Resources Agency adopted CEQA Guideline Amendments related to climate change. These amendments became effective on March 18, 2010. The amended guidelines established several new State CEQA Guideline requirements concerning the analysis of GHGs, including:

- Requiring a lead agency to "make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project" (§15064(a))
- Providing a lead agency with the discretion to determine whether to use quantitative or qualitative analysis or performance standards to determine the significance of GHG emissions resulting from a particular project (§15064.4(a))
- Requiring a lead agency to consider the following factors when assessing the significant impacts from GHG emissions on the environment:
  a) The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
  b) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
  c) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions. (§15064.4(b))
- Allowing lead agencies to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures, including offsets that are not otherwise required (§ 15126.4(c)).

The amended guidelines also established two new guidance questions regarding GHG emissions in the Environmental Checklist set forth in Appendix G of the State CEQA Guidelines, as stated later in this report.

The adopted amendments do not establish a GHG emission threshold, and instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts.[1] The Natural Resources Agency also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.[2]

---

[1] The State CEQA Guidelines do not establish thresholds of significance for other potential environmental impacts, and SB97 did not authorize the development of a statement threshold as part of this State CEQA Guidelines update. Rather, the proposed amendments recognize a lead agency's existing authority to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts." Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines, p. 84.

[2] "A project's compliance with regulations or requirements implementing AB 32 or other laws and policies is not irrelevant. Section 15064.4(b)(3) would allow a lead agency to consider compliance with requirements

Senate Bill 375. SB 375, signed into law on October 1, 2008, is intended to enhance ARB's ability to reach AB 32 goals by directing ARB to develop regional GHG emissions reduction targets to be achieved within the automobile and light truck sectors for 2020 and 2035. The targets are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see EO S-1-07), and other ARB-approved measures to reduce GHG emissions. In late September 2010, the ARB announced GHG reduction goals for implementation by regional land use and transportation agencies. As shown below in Table F, the regional emissions reduction goal for Southern California is 8 percent by 2020 and 13 percent by 2035 compared to 2005 emissions levels.

Table F: September 2010 ARB SB 375 Reduction Goals

	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	7	15
San Diego	7	13
Sacramento	7	16
Central Valley/San Joaquin	5	10
Los Angeles/Southern California	8	13

ARB = California Air Resources Board
SB = Senate Bill

ARB will work with California's 18 Metropolitan Planning Organizations (MPOs) to align their regional transportation, housing, and land use plans and prepare a "Sustainable Communities Strategy" within the Regional Transportation Plan to reduce the number of vehicle miles traveled in their respective regions and demonstrate the region's ability to attain its GHG reduction targets. If a Sustainable Communities Strategy is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining State CEQA Guideline requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the Sustainable Communities Strategy or Alternative Planning Strategy.

Executive Order S-21-09. On September 15, 2009, Governor Schwarzenegger issued EO S-21-09. This EO directed ARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. On September 23, 2010, the ARB adopted the "Renewable Electricity Standard" (RES) to require a 33 percent by 2020 renewable energy procurement mandate for most retail sellers of electricity in California.[1]

---

and regulations in the determination of significance of a project's greenhouse gas emissions." Final Statement of Reasons, p. 100.

[1] ARB. *News Release: California commits to more clean, green energy.* Available at: http://www.arb.ca.gov/newsrel/newsrelease.php?id=155, last accessed November 2012. Also refer to Title 17, Cal. Code Regs., § 97004(a).

California Green Building Code and California 2013 Building Energy Efficiency Standards. California Green Buildings Standards Code (Cal Green Code) (California Code of Regulations [CCR], Title 24, part 11) was adopted by the California Building Standards Commission in 2010 and became effective in January, 2011. The Code applies to all newly constructed residential, nonresidential, commercial, mixed-use, and State-owned facilities, as well as schools and hospitals. Cal Green Code is comprised of Mandatory Residential and Nonresidential Measures and more stringent Voluntary Measures (TIERs I and II).

Mandatory Measures are required to be implemented on all new construction projects and consist of a wide array of green measures concerning project site design, water use reduction, improvement of indoor air quality, and conservation of materials and resources. The Cal Green Building Code refers to Title 24, Part 6 compliance with respect to energy efficiency; however, it encourages 15 percent energy use reduction over that required in Part 6. Voluntary Measures are optional, more stringent measures that may be used by jurisdictions that strive to enhance their commitment toward green and sustainable design and achievement of AB 32 goals. Under TIERs I and II, all new construction projects are required to reduce energy consumption by 15 percent and 30 percent, respectively, below the baseline required under the CEC, as well as implement more stringent green measures than those required by mandatory code.

In early 2013 the California Building Standards Commission adopted the 2013 California Building Standards Code that also included the latest 2013 CALGreen Code, which became effective on January 1, 2014. The mandatory provisions of the code are anticipated to reduce 3 MMT of GHG emissions by 2020, reduce water use by 20% or more, and divert 50% of construction waste from landfills. The 2013 California Energy Code (Title 24, Part 6), which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2), became effective on July 1, 2014.

Senate Bill X1-2. On April 12, 2011, California Governor Jerry Brown signed SB X1-2. This bill supersedes the 33 percent by 2020 Renewables Portfolio Standard (RPS), created by EO S-14-08 that Governor Arnold Schwarzenegger previously signed. The RPS require that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of ARB's AB 32 Climate Change Scoping Plan. The cap-and-trade emissions trading program developed by ARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the state by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap contains three compliance phases. In compliance phase one, large emitters from the electricity and industrial sector come under the cap. In compliance phase two, which commences in 2015, fuels will be subject to the cap. Compliance phase three will include all three sectors (electricity, industry, fuels) and run until 2020. ARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities (California Air Resources Board 2012). California is working closely with British Columbia, Ontario, Quebec, and Manitoba through the Western Climate Initiative to develop harmonized cap-and-trade programs that will deliver cost-effective emission

reductions. Two lawsuits have been filed against cap-and-trade, but the cap-and-trade program will be implemented as is until further notice.

Regional Air Quality Planning Framework

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the State.

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

Regional Air Quality Management Plan

The SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every 3 years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2012 AQMP in December 2012 and forwarded it to ARB for review and approval.

The 2012 AQMP incorporated the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

In April 2008 the SCAQMD convened a GHG CEQA Significance Threshold Working Group in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents.[1] The goal of the working group was to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be used on an interim basis until ARB (or some other state agency) developed statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; nonresidential; industrial; etc. However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects in which it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) as a screening numerical threshold.

[1] For more information see: http://www.aqmd.gov/ceqa/handbook/GHG/GHG.html.

In September 2010, the Working Group released additional revisions, which recommended a project-level efficiency target of 4.8 $MTCO_2e$ per service population (SP) as a 2020 target and 3.0 $MTCO_2e$, per SP as a 2035 target. The recommended plan-level target for 2020 was 6.6 $MTCO_2e$ and the plan level target for 2035 was 4.1 $MTCO_2e$. The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable to boilers and process heaters, forestry, and manure management projects.

City of Irwindale.

General Plan Air Quality Element.

The Air Quality Element is not a required chapter of the General Plan. However, by the inclusion of this element in the General Plan, the City has acknowledged the existing condition of the quality of the air, and the City's commitment to the improvement the City's residents' quality of life. Although the City General Plan does not include any specific GHG or climate change policies or goals, a number of the goals, policies, and programs identified in the Air Quality Element would result in an indirect reduction in GHG emissions through reductions in vehicle trips, vehicle miles traveled, and energy use.

THRESHOLDS OF SIGNIFICANCE

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. The SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (April 1993) with associated updates, and the City of Irwindale guidelines were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in the document (including an older version of the URBEMIS model) are outdated; therefore, the current model, CalEEMod Version 2013.2.2, was used to estimate project-related mobile- and stationary-source emissions in this Air Quality Analysis.

The Air Quality Analysis includes estimated emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips as well as by emissions associated with stationary sources used on site. Localized air quality impacts (i.e., higher CO concentrations [CO hot spots] near intersections or roadway segments in the project vicinity) would be small and less than significant due to the generally low ambient CO concentrations (maximum 3.1 ppm for the 1-hour period and 1.7 ppm for the 8-hour period) in the project area.

The net increase in pollutant emissions determines the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with federal and State AAQS.

On December 5, 2008, the SCAQMD adopted an interim GHG significance threshold for projects in which the lead agency is using a tiered approach for determining significance. The objective of the SCAQMD's interim GHG significance threshold proposal was to achieve a GHG emission capture rate of 90 percent for all new or modified stationary-source projects.

STATE THRESHOLDS OF SIGNIFICANCE

Based on *Guidelines for the Implementation of California Environmental Quality Act*, Appendix G, Public Resource Code (PRC) Sections 15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any AAQS, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

REGIONAL THRESHOLDS OF SIGNIFICANCE

In addition to the federal and State AAQS, there are daily emissions thresholds for construction and operation of a proposed project in the Basin. The Basin is administered by the SCAQMD, and guidelines and emissions thresholds established by the SCAQMD. It should be noted that the

emissions thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions have been established for the Basin:

- 75 pounds per day (lbs/day) of ROC
- 100 lbs/day of NO_X
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Projects in the Basin with construction-related emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Regional Thresholds for Operational Emissions

The following CEQA significance thresholds for operational emissions have been established for the Basin:

- 55 lbs/day of ROC
- 55 lbs/day of NO_X
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Projects in the Basin with operational emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Local Microscale Concentration Standards. The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 ppm
- California State 8-hour CO standard of 9 ppm

Thresholds for Localized Impact Analysis

The SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. Localized Significance Thresholds (LSTs) represent the maximum emissions from a project site that are not expected to result in an exceedance of the national or State AAQS, as previously shown in Table A. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA for the localized impacts analysis is the East San Gabriel Valley area.

In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of the national or State AAQS. If ambient levels already exceed a State or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are nonattainment pollutants. For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions. The Rule 1301 threshold of 2.5 $\mu g/m^3$ applies to operational activities.

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD performed air dispersion modeling for a range of construction sites less than or equal to 5 ac in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

The SCAQMD has issued guidance on applying CalEEMod modeling results to localized impacts analysis.[1] Based on the planned construction equipment set, the maximum disturbed area in any one day would be approximately 4 acres. The operational localized significance for a project greater than 5 ac can be determined by performing the screening-level analysis using the 5 ac LSTs before using the dispersion modeling because the screening-level analysis is more conservative, and if no exceedance of the screening-level thresholds is identified, then the chance of local concentration exceeding national or State AAQS is small. Since the total gross area for the project site is larger than 5 ac, the LST screening thresholds for 5 ac are used in this analysis for operational emissions.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The closest sensitive receptors to the project site are residences 0.4 mile north of the project site. The nearest schools are Olive Junior High and Walnut Elementary School approximately 0.5 mile southeast of the project site. The nearest hospital, City of Hope Helford

[1] From the SCAQMD website: www.aqmd.gov/ceqa/handbook/lst/CalEEModguidance.pdf.

Clinical Research Hospital, is approximately 1.3 miles northeast of the project site. Therefore, the following emissions thresholds apply during project construction and operations:

- **Construction Localized Significance Thresholds, 4 ac, 0.4 mile distance**
  - 560 lbs/day of NO_X
  - 24,403 lbs/day of CO
  - 222 lbs/day of PM_{10}
  - 111 lbs/day of $PM_{2.5}$
- **Operation Localized Significance Thresholds, 5 ac, 0.4 mile distance**
  - 584 lbs/day of NO_X
  - 25,558 lbs/day of CO
  - 55 lbs/day of PM_{10}
  - 28 lbs/day of $PM_{2.5}$

Thresholds for Global Climate Change

ARB's AB 32 Scoping Plan. As described above, the May 22, 2014 update to the ARB Scoping Plan determined that in order to achieve 1990 level of emissions statewide to satisfy the requirements of AB 32, California would need to reduce its overall 2020 emissions for all sectors by 15% below the BAU 2020 projection. BAU is defined as emissions that would be generated prior to AB 32-related emission restrictions beginning in 2006 (e.g., Pavley standards). A project would be consistent with ARB's Scoping Plan (as of May 22, 2014) if it is constructed and operated in a manner that would result in 15% less GHG emissions than the BAU 2020 projection.

While an individual project's emissions would amount to a small fraction of statewide GHG emissions, AB 32's assessment of global warming as posing a "serious threat" warrants consideration of the impact of emissions from the project on climate change as cumulatively considerable, and triggers compliance with the 15% reduction from BAU 2020 requirement under AB 32.

Thresholds of Significance

Criteria for determining the significance of impacts related to GHG emissions are based on criteria contained in Appendix G of the State CEQA Guidelines. The proposed project could have a significant impact on the environment if it would result in any of the following.

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

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

SCAQMD and CEQA. As the SCAQMD has recognized, the analysis of GHGs is a much different analysis than that of criteria pollutants for the following reasons. For criteria pollutants, significance

thresholds are based on daily emissions because attainment or nonattainment is based on daily exceedances of applicable AAQS. Further, several AAQS are based on relatively short-term exposure effects on human health (e.g., 1-hour and 8-hour). Since the half-life of CO_2 is approximately 100 years, for example, the effects of GHGs are longer-term, affecting global climate over a relatively long time frame. As a result, the SCAQMD's current position is to evaluate GHG effects over a longer time frame than a single day.

The recommended approach for GHG analysis included in OPR's June 2008 release is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below a level of significance.[1] The June 2008 OPR guidance provides some additional direction regarding planning documents as follows: "CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that will reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation…. For local government lead agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews."

The State CEQA Guidelines include the following direction regarding determination of significant impacts from GHG emissions (§ 15064.4):

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the Lead Agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> > (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or
> >
> > (2) Rely on a qualitative analysis or performance based standards.
>
> (b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:
>
> > (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

[1] State of California, 2008. Governor's Office of Planning and Research. *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*. June 19.

> (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
>
> (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further, states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

While individual projects are unlikely to measurably affect GCC, each project incrementally contributes toward the potential for GCC on a cumulative basis, in concert with all other past, present, and probable future projects.

Despite this, the CEQA statutes, and OPR guidelines do not prescribe thresholds of significance (what amount of GHG emissions would constitute a significant impact on the environment) or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency as supported by substantial evidence.

ARB Scoping and AB32. As described above, the methodology used to analyze the project's compliance with the ARB Scoping Plan's requirement of a 15% reduction from "business as usual" (BAU) 2020 under AB 32 includes a calculation of the project's construction and operational GHG emissions under both a BAU scenario and a present conditions scenario. The emissions generated for the BAU scenario does not take into account any GHG emissions reductions that would result from any AB 32-related emission restrictions (i.e., Pavley standards or LCFS), while the present conditions scenario takes these emission restrictions into account. The significance analysis compares the numeric level of emissions generated by the proposed project under these two scenarios to determine whether the project complies with the required reductions in GHG emissions under AB 32, which would be a 15% reduction below BAU conditions.

IMPACTS AND MITIGATION

Air pollutant emissions associated with the project would occur over the short term from construction activities, such as fugitive dust from demolition, site preparation, and grading, and emissions from equipment exhaust. There would be long-term regional emissions associated with project-related vehicular trips and due to energy consumption such as electricity usage by the proposed land uses.

CONSTRUCTION IMPACTS

Equipment Exhausts and Related Construction Activities

Construction activities produce combustion emissions from various sources, such as demolition, grading, site preparation, utility engines, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. This analysis provides the peak-day construction emissions. The project is planned to be completed in two phases. Phase 1 of the project would develop approximately 455,000 square feet or 65 percent of the total project building space. Phase 2 would develop approximately 245,000 square feet or 35 percent of the total project space. Table G lists a representative project construction schedule that characterizes the peak construction emissions day for each of the detailed phases of both of Phases 1 and 2. The detailed phasing is based on project plans, the equipment type, amount, hours per day, and horsepower are CalEEMod defaults. Table H lists a representative set of equipment to be used on any one day for each detailed phase. While there may be other sets of equipment in use on other days in each detailed phase, this set is representative of the peak day for each detailed phase.

The most recent version of the CalEEMod model (Version 2013.2.2) was used to calculate the construction emissions, as shown in Table I. The emissions rates shown are from the CalEEMod output tables listed as “Mitigated Construction,” even though the only measures that have been applied to the analysis are the required construction emissions control measures, or standard conditions. They are also the combination of the on- and off-site emissions.

Since no exceedances of any criteria pollutants are expected, no significant impacts would occur for project construction and no additional mitigation is required above the required construction emissions control measures, or standard conditions. Standard measures are discussed later in this report. Details of the emission factors and other assumptions are included in Appendix A.

Table G: Tentative Project Construction Schedule

Construction Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	1/1/2015	2/27/2015	5	42
2	Site Preparation	3/2/2015	3/20/2015	5	15
3	Grading	3/23/2015	4/3/2015	5	10
4	Building Construction	4/4/2015	7/5/2018	5	849
5	Architectural Coating	5/2/2016	7/1/2018	5	565
6	Paving	7/6/2018	10/20/2018	5	76

Source: Project Plans (August 2014).

Table H: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	162	0.38
	Rubber Tired Dozers	2	8	255	0.40
Site Preparation	Rubber Tired Dozers	3	8	255	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	2	8	162	0.38
	Graders	1	8	174	0.41
	Rubber Tired Dozers	1	8	255	0.40
	Scrapers	2	8	361	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	226	0.29
	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	2	8	125	0.42
	Paving Equipment	2	8	130	0.36
	Rollers	2	8	80	0.38

Source: CalEEMod Defaults.

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis depending on the level of activity, the specific operations, and weather conditions at the time of construction.

The proposed project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust (standard conditions).

Table I lists total peak daily construction emissions (i.e., fugitive dust emissions and construction equipment exhausts) that would occur during either Phase 1 or Phase 2 and have incorporated all required control measures to reduce PM_{10} and $PM_{2.5}$ emissions from construction.

Table I: Short-Term Peak Daily Regional Construction Emissions for Phases 1 & 2

Construction Phase	Total Regional Pollutant Emissions (lbs/day)								
	VOC	**NO_X**	**CO**	**SO_2**	**Fugitive PM_{10}**	**Exhaust PM_{10}**	**Fugitive $PM_{2.5}$**	**Exhaust $PM_{2.5}$**	**CO_2e**
Demolition	5.7	66	50	0.082	5.7	2.7	0.99	2.6	8,400
Site Preparation	5.3	57	44	0.042	7.2	3.1	3.9	2.8	4,400
Grading	6.9	79	52	0.065	3.6	3.8	1.5	3.5	6,800
Building Construction	14	83	150	0.28	15	3	4	2.8	26,000
Architectural Coating	30	3.6	16	0.034	2.4	0.22	0.65	0.22	2,900
Paving	2.5	17	15	0.024	0.17	0.94	0.045	0.86	2,400
Peak Daily	**44**	**87**	**170**	**0.31**	**21**		**7.7**		**29,000**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**		**55**		**No Threshold**
Significant Emissions?	**No**	**No**	**No**	**No**	**No**		**No**		

Source: LSA Associates, Inc. (August 2014).
Note: The analysis incorporates all required control measures to reduce PM_{10} and $PM_{2.5}$ emissions from construction.

CO = carbon monoxide
CO_2 = carbon dioxide
CO_{2e} = carbon dioxide equivalent
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
VOC = volatile organic compounds

Architectural Coatings

Architectural coatings contain VOCs that are similar to ROCs and are part of the O_3 precursors. Based on the proposed project, it is estimated that application of the architectural coatings for the proposed peak construction day (when building construction will also be occurring) would result in a peak of 44 (14 + 30) lbs/day of VOC. Therefore, this peak daily VOC emissions rate would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Localized Impacts Analysis

The SCAQMD has issued guidance on applying CalEEMod modeling results to localized impacts analysis.[1] Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The existing residences nearest to the project site are approximately 0.4 mile north of the project boundary. Table J shows that the emissions of the pollutants on the peak day of construction will result in concentrations of pollutants at these nearest residences that are all below the SCAQMD thresholds of significance.

Table J: Construction Localized Impacts Analysis

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	79	51	10.1	6.7
Localized Significance Thresholds	**584**	**25,558**	**229**	**116**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (August 2014).
Note: Source Receptor Area = East San Gabriel Valley, 4 acres, 0.4 mile distance for residents.
CO = carbon monoxide
LST = localized significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

This localized impact analysis is a screening-level HRA. The LST analysis shows that all pollutant concentrations would be well below their thresholds of significance, no person living near this project would be exposed to unhealthful levels of air pollutants from project operational emissions; therefore an HRA is not required.

Odors

Heavy-duty equipment in the project area during construction would emit odors, primarily from the equipment exhaust. However, the construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states: “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.” The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

[1] From the SCAQMD website: www.aqmd.gov/ceqa/handbook/lst/CalEEModguidance.pdf.

Naturally Occurring Asbestos (NOA)

The proposed project is located in Los Angeles County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for NOA during project construction is small and less than significant.

Construction Emissions Conclusions

Table I shows that daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by the SCAQMD. Table J shows that during construction, there will be no localized significant impacts. Therefore, no mitigation is required for construction related air quality impacts.

LONG-TERM REGIONAL AIR QUALITY IMPACTS

Long-Term Project Operational Emissions

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in both stationary- and mobile-source emissions. The stationary-source emissions would come from many sources, including the use of consumer products, landscape equipment, general energy, and solid waste. Based on trip generation factors provided in the traffic impact analysis prepared for the proposed project (LSA Associates, Inc., December 2014), the project's weekday rate of 17,788 ADT and the weekend (both Sat & Sun) rate of 27,408 ADT were entered in the CalEEMod model. Long-term operational emissions associated with the proposed project are shown in Table K. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating. Table K shows that the emissions as a result of the proposed project operations would exceed the corresponding SCAQMD daily emission thresholds for VOC, NO_X, and CO, while emissions of SO_X, PM_{10} and $PM_{2.5}$ would all be less than the SCAQMD daily thresholds.

These exceedances are due to the large number of vehicles operating due to the project, nearly 18,000 per weekday and 27,500 on Saturday and Sunday. Nearly 100 percent of these emissions are from mobile sources, which are all private vehicles used for employees and customers of the project and delivery trucks, all out of the direct control of the operators of the proposed project.

Table K: Opening Year Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	14	0.00072	0.077	0.00001	0.00028	0.00028
Energy Sources	0.035	0.32	0.27	0.0019	0.024	0.024
Workers, customers & misc. vehicles	48	110	450	1.1	75	21
Delivery trucks	34	78	320	0.79	53	15
Total Project Emissions	**96**	**188**	**770**	**1.9**	**130**	**36**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Source: LSA Associates, Inc. (October 2014).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides oxides
VOC = volatile organic compounds

While some influence could be made on the employees, the project operators have no control or means of influencing how the customer private vehicles are used. Table L shows the opening year operational emissions will all feasible mobile source mitigation available in the CalEEMod model implemented. As shown, even implementing all available measures, the emissions are only reduced 1 to 2 percent. Thus, there are no feasible mitigation measures that would reduce these emissions to less than the thresholds. Therefore, project-related long-term air quality impacts would be significant and unavoidable.

Table L: Opening Year Regional Operational Emissions with Possible Mitigation

Source	Pollutant Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Sources	14	0.00072	0.077	0.00001	0.00028	0.00028
Energy Sources	0.029	0.26	0.22	0.0016	0.02	0.02
Workers, customers & misc. vehicles	47	110	440	1.1	74	21
Delivery trucks	34	77	320	0.78	53	15
Total Project Emissions	**95**	**187**	**760**	**1.9**	**127**	**36**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Source: LSA Associates, Inc. (October 2014).
CO = carbon monoxide
CO_2 = carbon dioxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
VOC = volatile organic compounds

Localized Impacts Analysis

Table M shows the calculated emissions for the proposed operational activities compared with the appropriate SCAQMD localized impacts thresholds. By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table M include all on-site project-related stationary sources and 5 percent of the project-related mobile sources, which is an estimate of the amount of project- related vehicle traffic that will occur on site. A total of 5 percent is considered conservative as the average trip lengths assumed are 16.6 miles for home to work, 8.4 miles for home to shopping, and 6.9 miles for other types of trips. It is unlikely that the average on-site distance driven will be even 1,000 feet, which is approximately 2.2 percent of the total miles traveled. Considering the total trip length included in the CalEEMod model, the 5 percent assumption is conservative.

Table M: Long-Term Operational LST

Emissions Sources	NO_X	CO	PM_{10}	$PM_{2.5}$
On-site Emissions	5.5	23	3.8	1.1
LST Thresholds	**584**	**25,558**	**55**	**28**
Significant Emissions?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc. (August 2014).
SRA: East San Gabriel Valley, 5 acres, 0.4 mile distance, on-site traffic 5 percent of total.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = State Recreation Area

Table M shows that the operational emission rates would not exceed the localized impacts thresholds for receptors at the nearest sensitive receptor, a residence at 0.4 mile distance. Therefore, the proposed operational activity would not result in a localized significant air quality impact. This localized impact analysis is a screening-level HRA. The LST shows that all pollutant concentrations would be well below their thresholds of significance, no person living near this project would be exposed to unhealthful levels of air pollutants from project operational emissions; therefore an HRA is not required. This means that, while the air quality impacts to the overall region would be significant, there would not be any health impacts to local residents from these emissions because of the distance and dispersion in the atmosphere preventing any of these emissions from creating concentrations above the safe levels defined in the ambient air quality standards.

Greenhouse Gas Emissions (GHG)

This section evaluates potentially significant impacts to global climate change (GCC) that could result from implementation of the proposed project. Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the project's emission of GHGs. Minimization measures are identified as appropriate.

GHG Emissions Background. Emissions estimates for the proposed project are discussed below. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City and the applicant at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance of similar projects and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and the decision-makers in understanding the project's potential contribution to GCC impacts, the information available to the City is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts, nor between any particular proposed minimization measure and any reduction in climate change impacts.

Construction and operation of project development would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation (as opposed to during its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings, and less than 20 percent of energy is consumed during construction.[1]

Table N lists the annual GHG emissions for the single highest year of each of the planned construction phases. In other words, the multi-year building construction phase would emit 3,000 MT of CO_2e during the peak year and something less for the other years of building construction. Total construction GHG emissions over the entire construction period are estimated to be 10,500 MT of CO_2e. Details of the emission factors and other assumptions are included in Appendix A.

Table N: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (MT/yr)			
	CO_2	CH_4	N_2O	CO_2e
Demolition	160	0.022	0	160
Site Preparation	29	0.0084	0	30
Grading	30	0.0088	0	31
Building Construction	3,000	0.17	0	3,000
Architectural Coating	310	0.018	0	310
Paving	83	0.024	0	83

Source: LSA Associates, Inc. (August 2014).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. As it was recognized that the GHG emissions without mitigation would be substantial and primarily from mobile sources, the following CalEEMod mitigation measures were activated:

[1] United Nations Environment Programme (UNEP), 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*, Paris, France.

- Mobile sources would be affected by the:
  - Increased density created by the project;
  - Improved pedestrian network;
  - Implementation of a trip reduction program;
  - The use of telecommuting and alternative work schedules; and
  - Employee vanpool/shuttle use.
- Energy use would be at the level of the 2005 Title 24 standards.
- High efficiency lighting would be used.

The GHG emission estimates presented in Table O show the amount of operational GHG emission that would result with all AB 32 emission restrictions implemented. As the CalEEMod model has not been updated to include the changes to energy use resulting from compliance with the new 2013 Title 24 building standards, it was assumed that compliance with those standards would result in a 25 percent improvement over the energy and water used by projects only complying with the 2008 Title 24 standards (the level built into the CalEEMod model). Appendix A includes the worksheets for the GHG emissions.

Table O: Long-Term Operational Greenhouse Gas Emissions – As Proposed with Mitigation

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	**NBio-CO_2**	**Total CO_2**	**CH_4**	**N_2O**	**CO_2e**
Construction emissions amortized over 30 years	0	350	350	0.021	0	350
Operational Emissions						
Area	0	0.0186	0.0186	0.00005	0	0.0196
Energy	0	2,700	2,700	0.123	0.0261	2,710
Workers, customers & misc. vehicles	0	10,800	10,800	0.419	0	10,800
Delivery trucks	0	7,700	7,700	0.299	0	7,700
Waste	149	0	149	8.8	0	334
Water	15	259	274	1.5	0.0384	318
Total Project Emissions	**164**	**21,800**	**22,000**	**11**	**0.064**	**22,200**

Source: LSA Associates, Inc. (August 2014).
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits. Also, the table shows the amount of operational GHG emission that would result with all AB 32 emission restrictions implemented.
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = Non-biologically generated CO_2

Area Sources. Area sources of GHG emissions include architectural coatings, carpet systems, resilient flooring, composite wood, consumer products, and landscaping. The project would result in a

negligible amount of GHG emissions from area sources due to the building design requiring little architectural coating and the anticipated light use of consumer products and landscaping.

Energy/Natural Gas Use. Buildings represent 39 percent of the United States' primary energy usage and 70 percent of electricity consumption.[1] The proposed project would increase the demand for electricity and natural gas due to the increased building area. The project would indirectly result in increased GHG emissions from off-site electricity generation at power plants and on-site natural gas consumption (2,710 MT of CO_2e/yr).

Mobile Sources. Mobile sources (vehicle trips and associated miles traveled) are the largest source of GHG emissions in California and represent approximately 38 percent of annual CO_2 emissions generated in the State. Like most land use development projects, VMT is the most direct indicator of CO_2 emissions from the proposed project, and associated CO_2 emissions function as the best indicator of total GHG emissions. Emissions from vehicle exhaust would comprise approximately 80 percent of the project's total CO_2e emissions. Emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of the City.

Solid Waste Disposal. The proposed project would also generate solid waste during the operation phase of the project. Average waste generation rates from a variety of sources are available from the California Integrated Waste Management Board (CIWMB).[2] The project would indirectly result in increased GHG emissions from solid waste treatment at treatment plants (334 MT of CO_2e/yr).

Water Use. Water-related energy use consumes 19 percent of California's electricity every year.[3] Energy use and related GHG emissions are based on electricity used for water supply and conveyance, water treatment, water distribution, and wastewater treatment. The project would indirectly result in increased GHG emissions from the off-site electricity generation at power plants and on-site natural gas consumption (318 MT of CO_2e/yr).

As shown in Table O, the project will produce 22,200 MT of CO_2e/yr, which is 0.0222 MMT of CO_2e/yr. For comparison, the existing emissions from the entire SCAG region are estimated to be approximately 176.79 MMT of CO_2e/yr, and the existing emissions for the entire State are estimated at approximately 496.95 MMT of CO_2e/yr.

At present, there is a federal ban on chlorofluorocarbons (CFCs); therefore, it is assumed the project would not generate emissions of CFCs. The project may emit a small amount of HFCs from leakage and service of refrigeration and air-conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used at the project site are unknown at this time. PFCs and SF_6 are typically used in industrial applications, none of which would be used on the project site. Therefore, it is not anticipated that the project would contribute significant emissions of these additional GHGs.

---

1 United States Department of Energy. 2003. *Buildings Energy Data Book.*

2 California Integrated Waste Management Board (CIWMB), 2009. Estimated Solid Waste Generation Rates for Residential Developments. Website: http://www.ciwmb.ca.gov/wastechar/wastegenrates/Residential.htm.

3 CEC, 2005. California's Water-Energy Relationship. November.

The CAT and the ARB have developed several reports to achieve the Governor's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT's 2010 "*Report to Governor Schwarzenegger and the Legislature*," the ARB's 2007 "*Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California,*" and the ARB's "*First Update to the Climate Change Scoping Plan: Building on the Framework."*

The reports identify strategies to reduce California's emissions to the levels proposed in EO S-3-05 and AB 32 that are applicable to the proposed project. The Scoping Plan is the most recent document, and the strategies included in the Scoping Plan that apply to the project are contained in Table P, which also summarizes the extent to which the project would comply with the strategies to help California reach the emission reduction targets.

The strategies listed in Table P are either part of the project design, requirements under local or State ordinances, or measures identified the ARB Scoping Plan, AB 32, and the Governor's EO S-3-05. As described, the proposed project would be compliant with all of the reduction strategies listed, and conflict with these requirements would not occur.

Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Mandatory Code	
California Green Building Code. The Cal Green Code prescribes a wide array of measures that would directly and indirectly result in reduction of GHG emissions from the Business as Usual Scenario (California Building Code). The mandatory measures that are applicable to non-residential projects include site selection, energy efficiency, water efficiency, materials conservation and resource efficiency, and environmental quality measures.	**Compliant.** The proposed project will comply with the 2013 Title 24 and Cal Green standards, including the 2013 CBC. The project would meet or exceed requirements of the Cal Green Code.
Energy Efficiency Measures	
Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). **Renewables Portfolio Standard.** Achieve a 33 percent renewable energy mix statewide. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Compliant.** The proposed project will comply with the 2013 Title 24 and Cal Green standards, including the 2013 CBC. In addition, the project would implement Project Feature GCC-1 and Mitigation Measures CC-1A-1–G, identified later, including measures to incorporate energy-efficient building design features.
Water Conservation and Efficiency Measures	
Water Use Efficiency. Continue efficiency programs and use cleaner energy sources to move and treat water. Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	**Compliant.** The project would implement Project Feature GCC-1 and Mitigation Measure CC-1G, the Cal Green Code and 2013 Title 24 measures that would develop green buildings and require measures to increase water use efficiency.

Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Solid Waste Reduction Measures	
Increase Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste. Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial GHG reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	**Compliant with Project Feature Incorporated.** Data available from the CIWMB indicates that the City of Irwindale (Los Angeles County) has not achieved the 50 percent diversion rate. The proposed project would implement Project Feature GCC-1, identified later, including measures to increase solid waste diversion, composting, and recycling.
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards. AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light-duty trucks. Regulations were adopted by the ARB in September 2004. **Light-Duty Vehicle Efficiency Measures.** Implement additional measures that could reduce light-duty GHG emissions. For example, measures to ensure that tires are properly inflated can both reduce GHG emissions and improve fuel efficiency. **Adopt Heavy- and Medium-Duty Fuel and Engine Efficiency Measures.** Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles. **Low Carbon Fuel Standard.** The ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	**Compliant.** The project does not involve the manufacture of vehicles. However, vehicles that are purchased and used within the project site would comply with any vehicle and fuel standards that the ARB adopts.
Regional Transportation-Related Greenhouse Gas Targets. Develop regional GHG emissions reduction targets for passenger vehicles. Local governments will play a significant role in the regional planning process to reach passenger vehicle GHG emissions reduction targets. Local governments have the ability to directly influence both the siting and design of new residential and commercial developments in a way that reduces GHGs associated with vehicle travel.	**Compliant.** Specific regional emission targets for transportation emissions do not directly apply to this project; regional GHG reduction target development is outside the scope of this project. The project will comply with any plans developed by the City of Irwindale, the County of Los Angeles, SCAG, the State, and the EPA. Mitigation Measures AQ-1A–F would result in a reduction of GHG emissions.
Measures to Reduce High-GWP Gases. The ARB has identified Discrete Early Action measures to reduce GHG emissions from the refrigerants used in car air conditioners, semiconductor manufacturing, and consumer products. The ARB has also identified potential reduction opportunities for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems,	**Compliant.** New products used or serviced on the project site (after implementation of the reduction of GHG emissions) would comply with ARB rules and regulations.

Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
and ensuring that existing car air conditioning systems do not leak.	

Source: LSA Associates, Inc. (August 2014).
AB = Assembly Bill
ARB = California Air Resources Board
Cal Green Code = California Green Buildings Standards Code
CBC = California Building Code
CIWMB = California Integrated Waste Management Board
GHG = greenhouse gas
GWP = Global Warming Potential

As described above in the Thresholds for Global Climate Change Section, the ARB Scoping Plan states that a 15 percent reduction below the estimated Business as Usual (BAU) levels was determined to be necessary to return to 1990 levels by 2020. BAU is defined as emissions that would be generated prior to AB 32-related emission restrictions beginning in 2006 (e.g., Pavley standards). The GHG emission estimates presented in Table Q show the amount of operational GHG emissions that would result without the above mitigation measures and without AB 32 emission restrictions.

Comparing these BAU emissions with those shown in Table O (representing the proposed project emissions that include all AB 32-related emission restrictions), the project would achieve an approximate 3.9 percent reduction below BAU. As described above for the regional emissions, 83 percent of the GHG emissions are from mobile sources, which are all private vehicles used for employees and customers of the project and delivery trucks.

Table Q: Long-Term Operational Greenhouse Gas Emissions – Business As Usual

Source	Pollutant Emissions (MT/yr)					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
Construction emissions amortized over 30 years	0	350	350	0.021	0	350
Operational Emissions						
Area	0	0.0186	0.0186	0.00005	0	0.0196
Energy	0	3,380	3,380	0.154	0.033	3,390
Workers, customers & misc. vehicles	0	10,900	10,900	0.424	0	10,900
Delivery trucks	0	7,800	7,800	0.302	0	7,800
Waste	149	0	149	8.8	0	334
Water	16	294	311	1.7	0.043	360
Total Project Emissions	165	22,700	22,900	11	0.076	23,100

Source: LSA Associates, Inc. (October 2014).
Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.
Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT/yr = metric tons per year
N_2O = nitrous oxide
NBio-CO_2 = Non-biologically generated CO_2

While some influence could be made on the employees, the project operators have no control or means of influencing how the customer private vehicles are used. As shown in the Long-Term Project Operational Emissions discussion, even implementing all available mobile source measures listed above, the emissions are only reduced 1 to 2 percent. Thus, there are no feasible mitigation measures that would increase the BAU-proposed project reduction from 3.9 to more than 15 percent. Thus, as the project would conflict with and impede implementation of reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor, project GHG emissions would be significant. Appendix A includes the CalEEMod modeling output for these GHG emissions.

LONG-TERM MICROSCALE (CO HOT SPOT) ANALYSIS

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, which is a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (residents, schoolchildren, the elderly, and hospital patients, etc.).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored in the Los Angeles County stations showed a highest recorded 1-hour concentration of 3.1 ppm (State standard is 20 ppm) and a highest 8-hour concentration of 1.7 ppm (State standard is 9 ppm) during the past 3 years (see Table E). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Given the extremely low level of CO concentrations in the project area, project-related vehicles are not expected to result in the CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by counties or regions classified as nonattainment areas. The AQMP's main purpose is to bring the area into compliance with the requirements of Federal and State air quality standards. The AQMP uses the assumptions and projections by local planning agencies to determine control strategies for regional compliance status. Therefore, any projects causing a significant impact on air quality would impede

the progress of the AQMP. CEQA requires that projects resulting in a General Plan Amendment be analyzed for consistency with the AQMP.

The 2012 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of the SCAQMD, and to reestablish clean air to the region. For a project in the Basin to be consistent with the AQMP, the pollutants emitted from the project must not exceed the SCAQMD significant threshold or cause a significant impact on air quality. If feasible mitigation measures can be implemented to reduce the project's impact level from significant to less than significant, the project is considered to be consistent with the AQMP.

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. It fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The SCAQMD has the following consistency criteria:

- Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out phase.

The purpose of the proposed project is to provide a new regional shopping center on former commercial/recreational land within the western portion of the City. As identified in the City of Irwindale's General Plan, the City designates the entire project site as Commercial/Recreation. As the AQMP is based on the General Plan, and the proposed project is consistent with that General Plan, according to the SCAQMD Consistency Criterion No. 2 the proposed project is consistent with the AQMP.

STANDARD CONDITIONS

Construction Operations

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. See

http://www.aqmd.gov/rules/reg/reg04/r403.pdf for rule details. As shown in Table I, implementation of Rule 403 measures results in dust emissions below SCAQMD thresholds.

Operations

The proposed project is required to comply with Title 24 of the California Code of Regulations (CCR) established by the CEC regarding energy conservation and green building standards.

These measures will result in reduced emissions during the construction and operation phases of the proposed project.

PROJECT FEATURES

Climate Change Impacts

Project Feature GCC-1 To ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in Assembly Bill (AB) 32, the Governor's Executive Order (EO) S-3-05, and other strategies to help reduce greenhouse gases (GHGs) to the level proposed by the Governor, the project will implement a variety of measures that will reduce its GHG emissions. To the extent feasible, and to the satisfaction of the City of Irwindale (City), the following measures will be incorporated into the design and construction of the project (including specific building projects):

Energy Efficiency Measures.

- Design all project buildings to exceed the California Building Code's (CBC) Title 24 energy standard, such as by installing energy-efficient heating and cooling systems, appliances and equipment, and control systems.

Water Conservation and Efficiency Measures.

- Devise a comprehensive water conservation strategy appropriate for the project and its location. The strategy may include the following, plus other innovative measures that may be appropriate:
  - Create water-efficient landscapes within the development.
  - Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
  - Restrict watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff.

In addition, the project would be subject to all applicable regulatory requirements, which would also reduce the GHG emissions of the project. Even with implementation of Project Feature GCC-1 and application of regulatory requirements, the project would conflict with and impede implementation of

reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor. Therefore, the project's contribution to cumulative GHG emissions would be significant.

MITIGATION MEASURES

Air Quality Impacts

The following measures are considered to be feasible and effective in reducing vehicle trip generation and resulting emissions from the project.

AQ-1A Prior to the issuance of building permits, the project applicant shall provide evidence to the City that appropriate transit facilities, including (but not limited to) bus bulbs/ turnouts, benches, and shelters have been incorporated into the proposed development. The project applicant shall demonstrate that the number, location, nature, and schedule of installation for any required public transit facility have been coordinated with the local and/or regional public transit entities that service the project area.

The project applicant shall further demonstrate to the City that the stated public transit facilities have been installed prior to the Certificate of Occupancy for any use where the public transit facility is required.

AQ-1B Prior to the issuance of building permits, the project applicant shall provide evidence to the City that the project incorporates sidewalks, paths, and/or bicycle/pedestrian connections to adjacent land uses, transit stops, and/or community-wide network(s) sufficient to satisfy City requirements for community connectivity.

The number, location, and nature of any such connectivity feature shall be included in the project plans and specifications.

AQ-1C The project applicant shall demonstrate to the City that the number, nature, and location of any bicycle parking area(s) have been established through consultation with the City, local bicycle organizations, and/or through implementation of the bicycle parking standard for a similarly sized project. The project's bicycle parking facilities shall be reviewed and approved by the City prior to the issuance of building permits. Factors that may be considered in the determination of required bicycle parking area(s) include (but shall not be limited to) convenience, security, safety, the adjacency of other bicycle facilities, and anticipated usage.

The number, location, and nature of any bicycle parking feature shall be included in the project plans and specifications.

AQ-1D Prior to the issuance of the first Certificate of Occupancy, the project applicant shall prepare and submit to the City for review and approval, a Transportation Demand Management (TDM) Plan that identifies measures to reduce the percentage of individual-driver vehicle trips to the proposed development. The target vehicle trip reduction addressed in the TDM Plan shall be established through discussion with the City. Specific measures included in the plan shall include, but shall not be limited to:

- Installation and maintenance of an appropriate number of public transit facilities;

- Installation and maintenance of an appropriate number of bicycle parking facilities;
- Participation in local and regional employee carpool/ride share matching services;
- Providing preferential parking to carpool/ride share parking; and
- Requirements for on-site employer to provide carpool/ride share/public transit information to employees.

Factors that may be considered in the development of TDM measures include (but shall not be limited to) the proximity of local and regional transit features, the demographics and residency of project site employees, the number of employers participating in TDM Plan measures, and the proximity of pedestrian and bicycle facilities. The TDM Plan shall identify how the specific measures are anticipated to reduce single-occupancy vehicle trips to the project site. On or prior to the anniversary of the issuance of the first Certificate of Occupancy, the project applicant shall submit to the City for review, a report that provides a summary of effectiveness of the TDM Plan measures. Effectiveness may be measured by increases in public transit usage, increased participation in carpool/ ride share programs, increased retail visits and a corresponding reduction in parking lot usage, or other reasonable measure. Upon annual review by the City, the project applicant shall revise the TDM to reflect additional measures to reduce single-occupant vehicle trips to the project site.

AQ-1E The project shall include signage at delivery/loading areas that state delivery truck idling shall be limited to two minutes or less.

AQ-1F The project applicant shall designate two (2) percent of total parking spaces for electric vehicle parking and charging in preferential locations. These parking and charging locations shall be reviewed and approved by the City prior to the issuance of building permits and shall be included in the plans and specifications for the project.

Climate Change Impacts

To ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in AB 32, EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor, the project will implement a variety of measures that will reduce its GHG emissions.

CC-1A **Construction and Building Materials**. Prior to issuance of the first Certificate of Occupancy for each phase of development, the project applicant shall demonstrate that the following activities have been incorporated into the project and are shown as appropriate in the project plan:

- Divert by recycling at least 50 percent of the demolished and/or grubbed construction materials (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Use locally produced and/or manufactured building materials for construction of the project;
- Recycle/reuse demolished construction material; and

- Use "Green Building Materials," such as those materials which are resource efficient, and recycled and manufactured in an environmentally friendly way, including low Volatile Organic Compound (VOC) materials.

CC-1B **Passive Solar Design Elements.** Prior to final development map/plan approval, the applicant shall submit to the Irwindale Planning Department for review and approval a building plan that incorporates the following passive solar design elements:

- Proper building orientation to take advantage of the sun, shade, and wind.
- Thermal mass materials, such as tile or brick, used in flooring or walls, especially south-facing walls, to store the sun's heat during the day and release it back into the building at night or when the temperature drops.
- Insulation of both the ceilings and walls.
- Passive solar design techniques such as large south and west-facing windows with proper window overhangs and/or reflective window film to improve heating and cooling of the building naturally, reducing the need for artificial heating or cooling mechanisms.
- A daylighting system to effectively integrate daylight with electrical lighting systems to reduce electricity consumption when sufficient daylight is present within the building.

CC-1C **Energy Efficiency Measures.** Prior to the final development map/plan approval, the applicant shall submit to the Irwindale Planning Department for review and approval a building plan that requires and/or incorporates the following:

- Water heating equipment which includes integral automatic temperature controls and circulating service water system controls such as geothermal heat pumps (Geothermal heat pumps provide heating, cooling, and hot water, and are generally more efficient and less expensive to operate and maintain than conventional systems.);
- The installation of lighting systems with automatic time switch controls, occupant-sensing devices such as motion detectors, automatic daylighting controls, dimmers, indoor photo sensors, and efficient security, street, and parking lot lighting (e.g., high pressure low sodium fixtures);
- The use of alternative energy sources such as photovoltaic (i.e., solar electric) systems on all building rooftops to reduce the projects electrical energy consumption; and
- The use of alternative building materials that contain post-consumer recycled materials to the greatest extent possible.

CC-1D **Energy Management Design Systems.** Prior to final development map/plan approval, the applicant shall submit to the Irwindale Planning Department for review and approval a building plan which incorporates energy management systems to control space conditioning or HVAC systems including operating hours, set point, scheduling of chillers, etc.

CC-1E **Landscape Design Plan.** Prior to final development map/plan approval, the applicant shall submit to the Irwindale Planning Department for review and approval a landscape

design plan which integrates heat island minimization, xeriscape principles (i.e., landscaping that reduces or eliminates the need for supplemental water), and native drought-tolerant plants.

CC-1F **Water Conservation and Efficiency Measures.** To the satisfaction of the City, the following measures shall be incorporated into the design and construction of the project:

- Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include the following, plus other innovative measures that might be appropriate;
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;
- Design buildings to be water-efficient. Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets and waterless urinals;
- Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff; and
- Install a separate, non-potable distribution system to accommodate the potential future use of recycled water for landscape irrigation needs of large areas with irrigated landscaping.

CC-1G **LEED Certification.** As defined by the LEED Program of the United States Green Building Council, the project design shall qualify for a minimum of "LEED Certified" designation. Prior to occupancy or use of the new project buildings, the applicant shall provide evidence to the Irwindale Planning Department that an LEED Certified designation has been met.

Level of Impact after Mitigation. The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. However, even a reduction of this magnitude would not reduce all emissions to below the SCAQMD significance threshold. Therefore, the project's regional air quality impacts would remain significant and unavoidable.

With implementation of Mitigation Measures AQ-1A-F and CC-1A-G, GHG emissions would be reduced to the extent feasible by implementing transportation demand management measures and by reducing energy and water use. However, the implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce vehicle emission by approximately 10 to 15 percent. However, even a reduction of this magnitude would not reduce all emissions to below the SCAQMD significance threshold. There is no mitigation available with currently feasible technology to reduce the project's GHG impact to the extent required to reduce the project's cumulative impacts to a less-than-significant level. Therefore, the project's GHG impacts would remain significant and unavoidable.

CUMULATIVE IMPACTS

The project would contribute criteria pollutants to the area during temporary project construction. A number of individual projects in the area may be under construction simultaneously with the proposed project. Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction could result in substantial short-term increases in air pollutants. However, each project would be required to comply with the SCAQMD's standard construction measures. The proposed project's short-term construction emissions would not exceed the significance thresholds. Therefore, it will not have a significant short-term cumulative impact.

The project's long-term operational emissions would exceed the SCAQMD's regional criteria pollutant thresholds for VOC, NO_X, and CO. The project's GHG emissions would also result in significant impacts on global climate change. Therefore, the proposed project would potentially result in a significant long-term cumulative impacts.

IMPACTS TO THE PROPOSED PROJECT FROM GLOBAL CLIMATE CHANGE

Local temperatures could increase in time as a result of GCC with or without development as envisioned by the project. This increase in temperature could lead to other climate effects, including, but not limited to, increased flooding due to increased precipitation and runoff. At present, the extent of climate change impacts is uncertain, and more extensive monitoring of runoff is necessary for greater understanding of changes in hydrologic patterns. Studies indicate that increased temperatures could result in a greater portion of peak stream flows occurring earlier in the spring, with decreases in late spring and early summer. These changes could have implications for water supply, flood management, and ecosystem health. In addition, there is a potential for sea level rising due to global warming. However, based on the location of the project site, the proposed project is not expected to be significantly affected by global climate change.

REFERENCES

California Air Resources Board 2011–2013. Air Quality Data. ARB website.

———. 2013. http://www.arb.ca.gov/cc/inventory/data/data.htm (October 2013).

———. 2014. http://www.arb.ca.gov/cc/inventory/data/data.htm (April 2014).

———. Greenhouse Gas Inventory Data – 2000 to 2012. Website: http://www.arb.ca.gov/cc/inventory/data/data.htm (accessed August 2014).

———. *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework* (February 2014).

———. Website: http://www.arb.ca.gov.

———. Website: www.arb.ca.gov/adam/welcome.html.

California Climate Change Center, 2006. *Our Changing Climate. Assessing the Risks to California.* July.

California Department of Conservation. Website: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx.

California Energy Commission, 2005. California's Water-Energy Relationship. November.

———. 2007. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 – Final Staff Report, publication # CEC-600-2006-013-sf, Sacramento, CA, December 22, 2006; and January 23, 2007, update to that report.

California Environmental Protection Agency OEHHA and American Lung Association of California, 2002. *Health Effects of Diesel Exhaust*. April.

———. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* March.

California Integrated Waste Management Board, 2009. Estimated Solid Waste Generation Rates for Residential Developments. Website: http://www.ciwmb.ca.gov/wastechar/wastegenrates/Residential.htm.

California Energy Commission. 2005. California's Water-Energy Relationship. November.

Greenhouse Gas Threshold Working Group Meeting No. 13 Minutes from August 26, 2009. Website: http://www.aqmd.gov/ceqa/handbook/GHG/2009/aug26mtg/wkgp13minutes.pdf.

Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.*

———. *Climate Change 2007: The Physical Science Basis*. Website: http://www.ipcc.ch.

LSA Associates, Inc., Traffic Impact Analysis, August 2014.

South Coast Air Quality Management District. Air Quality Management Plan. 2014.

———. CEQA Air Quality Handbook. April 1993.

———. Final Localized Significance Threshold Methodology. June 2003.

———. Final – Methodology to Calculate Particulate Matter $(PM)_{2.5}$ and $PM_{2.5}$ Significance Thresholds. October 2006.

———. Website, www.aqmd.gov/ceqa/handbook/lst/CalEEModguidance.pdf.

United States Environmental Protection Agency. Website: www.epa.gov/air/data/index.html.

———. 2014. The 2014 U.S. Greenhouse Gas Inventory Report. Website: http://www.epa.gov/climatechange/emissions/usinventoryreport.html (accessed August 2014).

———. Air Quality Data 2010–2012. EPA website.

United Nations Environment Programme (UNEP), 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*, Paris, France.

United Nations Framework Convention on Climate Change, Combined total of Annex I and Non-Annex I Country CO_2e emissions. 2014. *Greenhouse Gas Inventory Data.* Website: http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php (accessed August 2014).

United States Department of Energy. 2003. *Buildings Energy Data Book.*

Western Regional Climate Center. Website: http://www.wrcc.dri.edu.

APPENDIX A

CALEEMOD MODEL PRINTOUTS

Irwindale Regional Shopping Center

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun.

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation - Assume that meeting 2013 Title 24 standards will result in a 25% improvement over 2008 Title 24 standards built into CalEEMod.

Water Mitigation - Water usage reduction due to 2013 Title 24 standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Exterior	856385	350000
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41

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					
2015	12.9904	80.9514	146.2527	0.2806	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	26,171.9514	26,171.9514	1.9497	0.0000	26,212.8945
2016	41.7414	77.1375	150.7758	0.3144	17.5024	2.9268	20.4292	4.6973	2.7465	7.4438	0.0000	28,464.2446	28,464.2446	1.5664	0.0000	28,497.1385
2017	40.5336	70.6600	139.6057	0.3142	17.5033	2.6438	20.1471	4.6976	2.4806	7.1782	0.0000	27,677.1772	27,677.1772	1.4866	0.0000	27,708.3947
2018	39.3674	63.8305	129.9430	0.3140	17.5033	2.2982	19.8015	4.6976	2.1569	6.8545	0.0000	26,925.3635	26,925.3635	1.4191	0.0000	26,955.1648
Total	**134.6327**	**292.5794**	**566.5773**	**1.2233**	**70.7764**	**11.6729**	**81.7352**	**24.0766**	**10.8838**	**34.3034**	**0.0000**	**109,238.7367**	**109,238.7367**	**6.4217**	**0.0000**	**109,373.5925**

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					
2015	12.9904	80.9514	146.2527	0.2806	15.0536	3.8042	18.0493	4.0477	3.4998	6.8460	0.0000	26,171.9514	26,171.9514	1.9497	0.0000	26,212.8945
2016	41.7414	77.1375	150.7758	0.3144	17.5024	2.9268	20.4292	4.6973	2.7465	7.4438	0.0000	28,464.2446	28,464.2446	1.5664	0.0000	28,497.1385
2017	40.5336	70.6600	139.6057	0.3142	17.5033	2.6438	20.1471	4.6976	2.4806	7.1782	0.0000	27,677.1772	27,677.1772	1.4866	0.0000	27,708.3947
2018	39.3674	63.8305	129.9430	0.3140	17.5033	2.2982	19.8015	4.6976	2.1569	6.8545	0.0000	26,925.3635	26,925.3635	1.4191	0.0000	26,955.1648
Total	**134.6327**	**292.5794**	**566.5773**	**1.2233**	**67.5625**	**11.6729**	**78.4270**	**18.1403**	**10.8838**	**28.3225**	**0.0000**	**109,238.7367**	**109,238.7367**	**6.4217**	**0.0000**	**109,373.5924**

	ROG	**NOx**	**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**	**4.54**	**0.00**	**4.05**	**24.66**	**0.00**	**17.44**	**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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959
Mobile	78.5542	179.4528	753.8405	1.9060	125.7053	2.6214	128.3268	33.5877	2.4154	36.0031		157,177.8735	157,177.8735	5.8721		157,301.1881
Total	**137.8695**	**179.7731**	**754.1863**	**1.9079**	**125.7053**	**2.6460**	**128.3514**	**33.5877**	**2.4400**	**36.0277**		**157,561.5987**	**157,561.5987**	**5.8799**	**7.0300e-003**	**157,687.2571**

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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
Mobile	78.5542	179.4528	753.8405	1.9060	125.7053	2.6214	128.3268	33.5877	2.4154	36.0031		157,177.8735	157,177.8735	5.8721		157,301.1881
Total	**137.8632**	**179.7163**	**754.1385**	**1.9076**	**125.7053**	**2.6417**	**128.3470**	**33.5877**	**2.4357**	**36.0234**		**157,493.3473**	**157,493.3473**	**5.8786**	**5.7800e-003**	**157,618.5903**

	ROG	**NOx**	**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**	**0.03**	**0.01**	**0.02**	**0.00**	**0.16**	**0.00**	**0.00**	**0.18**	**0.01**	**0.00**	**0.04**	**0.04**	**0.02**	**17.78**	**0.04**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

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					11.7185	0.0000	11.7185	1.7743	0.0000	1.7743			0.0000			0.0000

Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**11.7185**	**2.4508**	**14.1693**	**1.7743**	**2.2858**	**4.0601**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.0570	16.9810	11.3914	0.0400	0.9430	0.2900	1.2330	0.2582	0.2667	0.5249		4,073.8942	4,073.8942	0.0322		4,074.5699
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	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**1.1262**	**17.0676**	**12.4659**	**0.0421**	**1.1107**	**0.2915**	**1.4021**	**0.3027**	**0.2681**	**0.5707**		**4,258.6989**	**4,258.6989**	**0.0421**		**4,259.5834**

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					4.5702	0.0000	4.5702	0.6920	0.0000	0.6920			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**4.5702**	**2.4508**	**7.0210**	**0.6920**	**2.2858**	**2.9778**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.0570	16.9810	11.3914	0.0400	0.9430	0.2900	1.2330	0.2582	0.2667	0.5249		4,073.8942	4,073.8942	0.0322		4,074.5699
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	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**1.1262**	**17.0676**	**12.4659**	**0.0421**	**1.1107**	**0.2915**	**1.4021**	**0.3027**	**0.2681**	**0.5707**		**4,258.6989**	**4,258.6989**	**0.0421**		**4,259.5834**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

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	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

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	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**3.3826**	**3.8022**	**7.1848**	**1.4026**	**3.4980**	**4.9006**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483

Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.2904	44.6132	49.2149	0.0989	2.8364	0.7714	3.6079	0.8077	0.7093	1.5170		10,016.2678	10,016.2678	0.0787		10,017.9205
Worker	5.0410	6.3083	78.2933	0.1549	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		13,466.1065	13,466.1065	0.7244		13,481.3186
Total	**9.3314**	**50.9215**	**127.5082**	**0.2538**	**15.0536**	**0.8789**	**15.9325**	**4.0477**	**0.8079**	**4.8556**		**23,482.3743**	**23,482.3743**	**0.8031**		**23,499.2391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.2904	44.6132	49.2149	0.0989	2.8364	0.7714	3.6079	0.8077	0.7093	1.5170		10,016.2678	10,016.2678	0.0787		10,017.9205
Worker	5.0410	6.3083	78.2933	0.1549	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		13,466.1065	13,466.1065	0.7244		13,481.3186
Total	**9.3314**	**50.9215**	**127.5082**	**0.2538**	**15.0536**	**0.8789**	**15.9325**	**4.0477**	**0.8079**	**4.8556**		**23,482.3743**	**23,482.3743**	**0.8031**		**23,499.2391**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7925	39.4281	45.2846	0.0988	2.8373	0.6402	3.4775	0.8080	0.5888	1.3968		9,906.1869	9,906.1869	0.0711		9,907.6794
Worker	4.5501	5.6907	70.8956	0.1548	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		13,002.1375	13,002.1375	0.6665		13,016.1348
Total	**8.3426**	**45.1188**	**116.1802**	**0.2536**	**15.0545**	**0.7423**	**15.7968**	**4.0481**	**0.6826**	**4.7307**		**22,908.3243**	**22,908.3243**	**0.7376**		**22,923.8142**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7925	39.4281	45.2846	0.0988	2.8373	0.6402	3.4775	0.8080	0.5888	1.3968		9,906.1869	9,906.1869	0.0711		9,907.6794
Worker	4.5501	5.6907	70.8956	0.1548	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		13,002.1375	13,002.1375	0.6665		13,016.1348
Total	**8.3426**	**45.1188**	**116.1802**	**0.2536**	**15.0545**	**0.7423**	**15.7968**	**4.0481**	**0.6826**	**4.7307**		**22,908.3243**	**22,908.3243**	**0.7376**		**22,923.8142**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4763	35.9007	42.5895	0.0987	2.8382	0.5713	3.4095	0.8084	0.5254	1.3338		9,745.8890	9,745.8890	0.0687		9,747.3323
Worker	4.0906	5.1390	64.1629	0.1547	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		12,504.5489	12,504.5489	0.6152		12,517.4670
Total	**7.5669**	**41.0397**	**106.7524**	**0.2534**	**15.0554**	**0.6696**	**15.7249**	**4.0484**	**0.6161**	**4.6645**		**22,250.4378**	**22,250.4378**	**0.6839**		**22,264.7993**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4763	35.9007	42.5895	0.0987	2.8382	0.5713	3.4095	0.8084	0.5254	1.3338		9,745.8890	9,745.8890	0.0687		9,747.3323
Worker	4.0906	5.1390	64.1629	0.1547	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		12,504.5489	12,504.5489	0.6152		12,517.4670
Total	**7.5669**	**41.0397**	**106.7524**	**0.2534**	**15.0554**	**0.6696**	**15.7249**	**4.0484**	**0.6161**	**4.6645**		**22,250.4378**	**22,250.4378**	**0.6839**		**22,264.7993**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

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	3.2609	32.9677	40.5770	0.0986	2.8383	0.5385	3.3767	0.8084	0.4953	1.3037		9,582.4590	9,582.4590	0.0683		9,583.8937
Worker	3.6879	4.6621	58.2982	0.1547	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		12,039.2592	12,039.2592	0.5710		12,051.2491
Total	**6.9488**	**37.6298**	**98.8752**	**0.2532**	**15.0554**	**0.6342**	**15.6896**	**4.0484**	**0.5838**	**4.6323**		**21,621.7182**	**21,621.7182**	**0.6393**		**21,635.1428**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

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	3.2609	32.9677	40.5770	0.0986	2.8383	0.5385	3.3767	0.8084	0.4953	1.3037		9,582.4590	9,582.4590	0.0683		9,583.8937
Worker	3.6879	4.6621	58.2982	0.1547	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		12,039.2592	12,039.2592	0.5710		12,051.2491
Total	**6.9488**	**37.6298**	**98.8752**	**0.2532**	**15.0554**	**0.6342**	**15.6896**	**4.0484**	**0.5838**	**4.6323**		**21,621.7182**	**21,621.7182**	**0.6393**		**21,635.1428**

3.6 Architectural Coating - 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	28.7124					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	**29.0809**	**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	0.9117	1.1402	14.2051	0.0310	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,605.1858	2,605.1858	0.1336		2,607.9904
Total	**0.9117**	**1.1402**	**14.2051**	**0.0310**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,605.1858**	**2,605.1858**	**0.1336**		**2,607.9904**

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	28.7124					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	**29.0809**	**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	0.9117	1.1402	14.2051	0.0310	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,605.1858	2,605.1858	0.1336		2,607.9904
Total	**0.9117**	**1.1402**	**14.2051**	**0.0310**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,605.1858**	**2,605.1858**	**0.1336**		**2,607.9904**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					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	**29.0447**	**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	0.8196	1.0297	12.8561	0.0310	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,505.4860	2,505.4860	0.1233		2,508.0744
Total	**0.8196**	**1.0297**	**12.8561**	**0.0310**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,505.4860**	**2,505.4860**	**0.1233**		**2,508.0744**

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	28.7124					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	**29.0447**	**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	0.8196	1.0297	12.8561	0.0310	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,505.4860	2,505.4860	0.1233		2,508.0744
Total	**0.8196**	**1.0297**	**12.8561**	**0.0310**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,505.4860**	**2,505.4860**	**0.1233**		**2,508.0744**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7389	0.9341	11.6810	0.0310	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,412.2578	2,412.2578	0.1144		2,414.6602
Total	**0.7389**	**0.9341**	**11.6810**	**0.0310**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,412.2578**	**2,412.2578**	**0.1144**		**2,414.6602**

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	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7389	0.9341	11.6810	0.0310	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,412.2578	2,412.2578	0.1144		2,414.6602
Total	**0.7389**	**0.9341**	**11.6810**	**0.0310**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,412.2578**	**2,412.2578**	**0.1144**		**2,414.6602**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

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	78.5542	179.4528	753.8405	1.9060	125.7053	2.6214	128.3268	33.5877	2.4154	36.0031		157,177.8735	157,177.8735	5.8721		157,301.1881
Unmitigated	78.5542	179.4528	753.8405	1.9060	125.7053	2.6214	128.3268	33.5877	2.4154	36.0031		157,177.8735	157,177.8735	5.8721		157,301.1881

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	44,414,001	44,414,001
Total	17,787.00	27,405.00	27,405.00	44,414,001	44,414,001

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
NaturalGas Unmitigated	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959

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					
Regional Shopping Center	3260.27	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.0352**	**0.3196**	**0.2685**	**1.9200e-003**		**0.0243**	**0.0243**		**0.0243**	**0.0243**		**383.5616**	**383.5616**	**7.3500e-003**	**7.0300e-003**	**385.8959**

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					
Regional Shopping Center	2.68014	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0289**	**0.2628**	**0.2207**	**1.5800e-003**		**0.0200**	**0.0200**		**0.0200**	**0.0200**		**315.3102**	**315.3102**	**6.0400e-003**	**5.7800e-003**	**317.2292**

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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Unmitigated	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

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	4.4445					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**59.2801**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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	4.4445					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**59.2801**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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

Irwindale Regional Shopping Center

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun.

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation - Assume that meeting 2013 Title 24 standards will result in a 25% improvement over 2008 Title 24 standards built into CalEEMod.

Water Mitigation - Water usage reduction due to 2013 Title 24 standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Exterior	856385	350000
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41

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					
2015	13.5353	82.7337	149.5322	0.2702	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	25,253.4790	25,253.4790	1.9497	0.0000	25,294.4220
2016	42.2277	78.8058	153.2026	0.3020	17.5024	2.9334	20.4358	4.6973	2.7526	7.4499	0.0000	27,411.8277	27,411.8277	1.5685	0.0000	27,444.7658
2017	40.9526	72.1513	142.3432	0.3018	17.5033	2.6494	20.1527	4.6976	2.4857	7.1834	0.0000	26,661.0108	26,661.0108	1.4887	0.0000	26,692.2732
2018	39.7340	65.1743	132.9282	0.3016	17.5033	2.3033	19.8066	4.6976	2.1616	6.8592	0.0000	25,943.3205	25,943.3205	1.4213	0.0000	25,973.1679
Total	**136.4496**	**298.8652**	**578.0061**	**1.1757**	**70.7764**	**11.6903**	**81.7526**	**24.0766**	**10.8997**	**34.3193**	**0.0000**	**105,269.6379**	**105,269.6379**	**6.4282**	**0.0000**	**105,404.6290**

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					
2015	13.5353	82.7337	149.5322	0.2702	15.0536	3.8042	18.0587	4.0477	3.4998	6.8547	0.0000	25,253.4790	25,253.4790	1.9497	0.0000	25,294.4220
2016	42.2277	78.8058	153.2026	0.3020	17.5024	2.9334	20.4358	4.6973	2.7526	7.4499	0.0000	27,411.8277	27,411.8277	1.5685	0.0000	27,444.7658
2017	40.9526	72.1513	142.3432	0.3018	17.5033	2.6494	20.1527	4.6976	2.4857	7.1834	0.0000	26,661.0108	26,661.0108	1.4887	0.0000	26,692.2732
2018	39.7340	65.1743	132.9282	0.3016	17.5033	2.3033	19.8066	4.6976	2.1616	6.8592	0.0000	25,943.3205	25,943.3205	1.4213	0.0000	25,973.1679
Total	**136.4496**	**298.8652**	**578.0061**	**1.1757**	**67.5625**	**11.6903**	**78.4538**	**18.1403**	**10.8997**	**28.3471**	**0.0000**	**105,269.6379**	**105,269.6379**	**6.4282**	**0.0000**	**105,404.6290**

	ROG	**NOx**	**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**	**4.54**	**0.00**	**4.04**	**24.66**	**0.00**	**17.40**	**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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959
Mobile	81.6010	188.0635	765.4235	1.8110	125.7053	2.6356	128.3410	33.5877	2.4285	36.0162		149,645.7844	149,645.7844	5.8799		149,769.2626
Total	**140.9163**	**188.3838**	**765.7694**	**1.8129**	**125.7053**	**2.6602**	**128.3655**	**33.5877**	**2.4530**	**36.0407**		**150,029.5097**	**150,029.5097**	**5.8877**	**7.0300e-003**	**150,155.3316**

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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
Mobile	81.6010	188.0635	765.4235	1.8110	125.7053	2.6356	128.3410	33.5877	2.4285	36.0162		149,645.7844	149,645.7844	5.8799		149,769.2626
Total	**140.9100**	**188.3270**	**765.7216**	**1.8126**	**125.7053**	**2.6559**	**128.3612**	**33.5877**	**2.4487**	**36.0364**		**149,961.2583**	**149,961.2583**	**5.8864**	**5.7800e-003**	**150,086.6648**

	ROG	**NOx**	**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**	**0.03**	**0.01**	**0.02**	**0.00**	**0.16**	**0.00**	**0.00**	**0.18**	**0.01**	**0.00**	**0.05**	**0.05**	**0.02**	**17.78**	**0.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

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					11.7185	0.0000	11.7185	1.7743	0.0000	1.7743			0.0000			0.0000

Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**11.7185**	**2.4508**	**14.1693**	**1.7743**	**2.2858**	**4.0601**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.1189	17.5974	12.9202	0.0399	0.9430	0.2910	1.2340	0.2582	0.2676	0.5258		4,064.2474	4,064.2474	0.0326		4,064.9316
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	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**1.1898**	**17.6925**	**13.9140**	**0.0419**	**1.1107**	**0.2924**	**1.4031**	**0.3027**	**0.2690**	**0.5717**		**4,237.5940**	**4,237.5940**	**0.0425**		**4,238.4869**

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					4.5702	0.0000	4.5702	0.6920	0.0000	0.6920			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**4.5702**	**2.4508**	**7.0210**	**0.6920**	**2.2858**	**2.9778**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.1189	17.5974	12.9202	0.0399	0.9430	0.2910	1.2340	0.2582	0.2676	0.5258		4,064.2474	4,064.2474	0.0326		4,064.9316
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	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**1.1898**	**17.6925**	**13.9140**	**0.0419**	**1.1107**	**0.2924**	**1.4031**	**0.3027**	**0.2690**	**0.5717**		**4,237.5940**	**4,237.5940**	**0.0425**		**4,238.4869**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

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	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	**0.0850**	**0.1141**	**1.1926**	**2.3900e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**208.0159**	**208.0159**	**0.0119**		**208.2664**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

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	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	**0.0850**	**0.1141**	**1.1926**	**2.3900e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**208.0159**	**208.0159**	**0.0119**		**208.2664**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	**0.0945**	**0.1268**	**1.3251**	**2.6600e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**231.1287**	**231.1287**	**0.0133**		**231.4071**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**3.3826**	**3.8022**	**7.1848**	**1.4026**	**3.4980**	**4.9006**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	**0.0945**	**0.1268**	**1.3251**	**2.6600e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**231.1287**	**231.1287**	**0.0133**		**231.4071**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483

Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.7127	45.7729	58.3716	0.0983	2.8364	0.7809	3.6173	0.8077	0.7180	1.5257		9,932.7163	9,932.7163	0.0809		9,934.4154
Worker	5.1636	6.9309	72.4161	0.1452	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		12,631.1856	12,631.1856	0.7244		12,646.3977
Total	**9.8763**	**52.7038**	**130.7876**	**0.2434**	**15.0536**	**0.8884**	**15.9420**	**4.0477**	**0.8166**	**4.8643**		**22,563.9018**	**22,563.9018**	**0.8053**		**22,580.8131**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.7127	45.7729	58.3716	0.0983	2.8364	0.7809	3.6173	0.8077	0.7180	1.5257		9,932.7163	9,932.7163	0.0809		9,934.4154
Worker	5.1636	6.9309	72.4161	0.1452	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		12,631.1856	12,631.1856	0.7244		12,646.3977
Total	**9.8763**	**52.7038**	**130.7876**	**0.2434**	**15.0536**	**0.8884**	**15.9420**	**4.0477**	**0.8166**	**4.8643**		**22,563.9018**	**22,563.9018**	**0.8053**		**22,580.8131**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1568	40.4239	54.3542	0.0981	2.8373	0.6468	3.4842	0.8080	0.5948	1.4029		9,823.1727	9,823.1727	0.0732		9,824.7096
Worker	4.6517	6.2509	65.3616	0.1451	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		12,194.5481	12,194.5481	0.6665		12,208.5454
Total	**8.8085**	**46.6748**	**119.7158**	**0.2432**	**15.0545**	**0.7490**	**15.8034**	**4.0481**	**0.6887**	**4.7368**		**22,017.7208**	**22,017.7208**	**0.7397**		**22,033.2550**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1568	40.4239	54.3542	0.0981	2.8373	0.6468	3.4842	0.8080	0.5948	1.4029		9,823.1727	9,823.1727	0.0732		9,824.7096
Worker	4.6517	6.2509	65.3616	0.1451	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		12,194.5481	12,194.5481	0.6665		12,208.5454
Total	**8.8085**	**46.6748**	**119.7158**	**0.2432**	**15.0545**	**0.7490**	**15.8034**	**4.0481**	**0.6887**	**4.7368**		**22,017.7208**	**22,017.7208**	**0.7397**		**22,033.2550**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7969	36.7864	51.6004	0.0980	2.8382	0.5769	3.4151	0.8084	0.5306	1.3390		9,664.0196	9,664.0196	0.0709		9,665.5079
Worker	4.1726	5.6435	58.9367	0.1450	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		11,726.2053	11,726.2053	0.6152		11,739.1234
Total	**7.9695**	**42.4299**	**110.5371**	**0.2430**	**15.0554**	**0.6752**	**15.7306**	**4.0484**	**0.6213**	**4.6697**		**21,390.2250**	**21,390.2250**	**0.6860**		**21,404.6314**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7969	36.7864	51.6004	0.0980	2.8382	0.5769	3.4151	0.8084	0.5306	1.3390		9,664.0196	9,664.0196	0.0709		9,665.5079
Worker	4.1726	5.6435	58.9367	0.1450	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		11,726.2053	11,726.2053	0.6152		11,739.1234
Total	**7.9695**	**42.4299**	**110.5371**	**0.2430**	**15.0554**	**0.6752**	**15.7306**	**4.0484**	**0.6213**	**4.6697**		**21,390.2250**	**21,390.2250**	**0.6860**		**21,404.6314**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

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	3.5496	33.7638	49.5158	0.0979	2.8383	0.5436	3.3819	0.8084	0.5000	1.3084		9,501.7919	9,501.7919	0.0705		9,503.2728
Worker	3.7528	5.1184	53.3383	0.1449	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		11,288.3416	11,288.3416	0.5710		11,300.3315
Total	**7.3024**	**38.8822**	**102.8541**	**0.2428**	**15.0554**	**0.6393**	**15.6947**	**4.0484**	**0.5885**	**4.6370**		**20,790.1335**	**20,790.1335**	**0.6415**		**20,803.6042**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

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	3.5496	33.7638	49.5158	0.0979	2.8383	0.5436	3.3819	0.8084	0.5000	1.3084		9,501.7919	9,501.7919	0.0705		9,503.2728
Worker	3.7528	5.1184	53.3383	0.1449	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		11,288.3416	11,288.3416	0.5710		11,300.3315
Total	**7.3024**	**38.8822**	**102.8541**	**0.2428**	**15.0554**	**0.6393**	**15.6947**	**4.0484**	**0.5885**	**4.6370**		**20,790.1335**	**20,790.1335**	**0.6415**		**20,803.6042**

3.6 Architectural Coating - 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	28.7124					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	**29.0809**	**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	0.9321	1.2525	13.0962	0.0291	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,443.3724	2,443.3724	0.1336		2,446.1770
Total	**0.9321**	**1.2525**	**13.0962**	**0.0291**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,443.3724**	**2,443.3724**	**0.1336**		**2,446.1770**

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	28.7124					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	**29.0809**	**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	0.9321	1.2525	13.0962	0.0291	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,443.3724	2,443.3724	0.1336		2,446.1770
Total	**0.9321**	**1.2525**	**13.0962**	**0.0291**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,443.3724**	**2,443.3724**	**0.1336**		**2,446.1770**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					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	**29.0447**	**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	0.8360	1.1308	11.8089	0.0291	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,349.5325	2,349.5325	0.1233		2,352.1208
Total	**0.8360**	**1.1308**	**11.8089**	**0.0291**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,349.5325**	**2,349.5325**	**0.1233**		**2,352.1208**

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	28.7124					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	**29.0447**	**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	0.8360	1.1308	11.8089	0.0291	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,349.5325	2,349.5325	0.1233		2,352.1208
Total	**0.8360**	**1.1308**	**11.8089**	**0.0291**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,349.5325**	**2,349.5325**	**0.1233**		**2,352.1208**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7519	1.0256	10.6872	0.0290	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,261.7995	2,261.7995	0.1144		2,264.2018
Total	**0.7519**	**1.0256**	**10.6872**	**0.0290**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,261.7995**	**2,261.7995**	**0.1144**		**2,264.2018**

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	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7519	1.0256	10.6872	0.0290	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,261.7995	2,261.7995	0.1144		2,264.2018
Total	**0.7519**	**1.0256**	**10.6872**	**0.0290**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,261.7995**	**2,261.7995**	**0.1144**		**2,264.2018**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0515	0.0702	0.7320	1.9900e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		154.9178	154.9178	7.8400e-003		155.0823
Total	**0.0515**	**0.0702**	**0.7320**	**1.9900e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**154.9178**	**154.9178**	**7.8400e-003**		**155.0823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0515	0.0702	0.7320	1.9900e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		154.9178	154.9178	7.8400e-003		155.0823
Total	**0.0515**	**0.0702**	**0.7320**	**1.9900e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**154.9178**	**154.9178**	**7.8400e-003**		**155.0823**

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	81.6010	188.0635	765.4235	1.8110	125.7053	2.6356	128.3410	33.5877	2.4285	36.0162		149,645.7844	149,645.7844	5.8799		149,769.2626
Unmitigated	81.6010	188.0635	765.4235	1.8110	125.7053	2.6356	128.3410	33.5877	2.4285	36.0162		149,645.7844	149,645.7844	5.8799		149,769.2626

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	44,414,001	44,414,001
Total	17,787.00	27,405.00	27,405.00	44,414,001	44,414,001

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
NaturalGas Unmitigated	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959

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					
Regional Shopping Center	3260.27	0.0352	0.3196	0.2685	1.9200e-003		0.0243	0.0243		0.0243	0.0243		383.5616	383.5616	7.3500e-003	7.0300e-003	385.8959
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Total		**0.0352**	**0.3196**	**0.2685**	**1.9200e-003**		**0.0243**	**0.0243**		**0.0243**	**0.0243**		**383.5616**	**383.5616**	**7.3500e-003**	**7.0300e-003**	**385.8959**

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					
Regional Shopping Center	2.68014	0.0289	0.2628	0.2207	1.5800e-003		0.0200	0.0200		0.0200	0.0200		315.3102	315.3102	6.0400e-003	5.7800e-003	317.2292
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0289**	**0.2628**	**0.2207**	**1.5800e-003**		**0.0200**	**0.0200**		**0.0200**	**0.0200**		**315.3102**	**315.3102**	**6.0400e-003**	**5.7800e-003**	**317.2292**

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	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Unmitigated	59.2801	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

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	4.4445					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**59.2801**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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	4.4445					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**59.2801**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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

Irwindale Regional Shopping Center

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun.

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation - Assume that meeting 2013 Title 24 standards will result in a 25% improvement over 2008 Title 24 standards built into CalEEMod.

Water Mitigation - Water usage reduction due to 2013 Title 24 standards.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Exterior	856385	350000
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.4648	10.3488	16.1654	0.0288	1.8845	0.3908	2.2753	0.5229	0.3642	0.8871	0.0000	2,463.1975	2,463.1975	0.1695	0.0000	2,466.7577
2016	4.1651	10.2591	19.3948	0.0384	2.1397	0.3730	2.5127	0.5755	0.3495	0.9250	0.0000	3,170.1220	3,170.1220	0.1790	0.0000	3,173.8818
2017	5.2720	9.4997	18.5439	0.0397	2.2345	0.3440	2.5785	0.6007	0.3228	0.9234	0.0000	3,175.7096	3,175.7096	0.1754	0.0000	3,179.3934
2018	2.6741	5.0722	9.4709	0.0213	1.1531	0.1895	1.3426	0.3100	0.1772	0.4871	0.0000	1,670.7093	1,670.7093	0.1104	0.0000	1,673.0281
Total	**13.5760**	**35.1798**	**63.5750**	**0.1282**	**7.4118**	**1.2972**	**8.7090**	**2.0090**	**1.2137**	**3.2226**	**0.0000**	**10,479.7384**	**10,479.7384**	**0.6344**	**0.0000**	**10,493.0610**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.4648	10.3488	16.1654	0.0288	1.6253	0.3908	2.0161	0.4438	0.3642	0.8080	0.0000	2,463.1971	2,463.1971	0.1695	0.0000	2,466.7572
2016	4.1651	10.2591	19.3948	0.0384	2.1397	0.3730	2.5127	0.5755	0.3495	0.9250	0.0000	3,170.1216	3,170.1216	0.1790	0.0000	3,173.8814
2017	5.2720	9.4997	18.5439	0.0397	2.2345	0.3440	2.5785	0.6007	0.3228	0.9234	0.0000	3,175.7092	3,175.7092	0.1754	0.0000	3,179.3930
2018	2.6741	5.0722	9.4709	0.0213	1.1531	0.1895	1.3426	0.3100	0.1772	0.4871	0.0000	1,670.7090	1,670.7090	0.1104	0.0000	1,673.0278
Total	**13.5760**	**35.1798**	**63.5750**	**0.1282**	**7.1526**	**1.2972**	**8.4498**	**1.9298**	**1.2137**	**3.1435**	**0.0000**	**10,479.7368**	**10,479.7368**	**0.6344**	**0.0000**	**10,493.0595**

	ROG	**NOx**	**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**	**3.50**	**0.00**	**2.98**	**3.94**	**0.00**	**2.46**	**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	tons/yr										MT/yr					
Area	10.8182	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Energy	6.4200e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	3,376.5486	3,376.5486	0.1535	0.0327	3,389.9007
Mobile	10.5064	26.1384	104.8312	0.2498	16.8314	0.3579	17.1893	4.5040	0.3298	4.8338	0.0000	18,719.8399	18,719.8399	0.7260	0.0000	18,735.0865
Waste						0.0000	0.0000		0.0000	0.0000	149.1984	0.0000	149.1984	8.8174	0.0000	334.3631
Water						0.0000	0.0000		0.0000	0.0000	16.4499	294.2423	310.6921	1.7031	0.0427	359.6915
Total	**21.3310**	**26.1968**	**104.8898**	**0.2502**	**16.8314**	**0.3624**	**17.1938**	**4.5040**	**0.3342**	**4.8383**	**165.6482**	**22,390.6493**	**22,556.2976**	**11.4000**	**0.0754**	**22,819.0615**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	10.8182	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Energy	5.2700e-003	0.0480	0.0403	2.9000e-004		3.6400e-003	3.6400e-003		3.6400e-003	3.6400e-003	0.0000	2,698.7432	2,698.7432	0.1227	0.0261	2,709.4182
Mobile	10.5064	26.1384	104.8312	0.2498	16.8314	0.3579	17.1893	4.5040	0.3298	4.8338	0.0000	18,719.8399	18,719.8399	0.7260	0.0000	18,735.0865
Waste						0.0000	0.0000		0.0000	0.0000	149.1984	0.0000	149.1984	8.8174	0.0000	334.3631
Water						0.0000	0.0000		0.0000	0.0000	14.8049	258.7828	273.5877	1.5325	0.0384	317.6635
Total	**21.3299**	**26.1865**	**104.8811**	**0.2501**	**16.8314**	**0.3616**	**17.1930**	**4.5040**	**0.3334**	**4.8375**	**164.0032**	**21,677.3845**	**21,841.3877**	**11.1986**	**0.0645**	**22,096.5510**

	ROG	NOx	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	**0.01**	**0.04**	**0.01**	**0.02**	**0.00**	**0.22**	**0.00**	**0.00**	**0.24**	**0.02**	**0.99**	**3.19**	**3.17**	**1.77**	**14.41**	**3.17**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41

Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2461	0.0000	0.2461	0.0373	0.0000	0.0373	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0947	1.0156	0.7576	8.4000e-004		0.0515	0.0515		0.0480	0.0480	0.0000	78.6267	78.6267	0.0213	0.0000	79.0743
Total	**0.0947**	**1.0156**	**0.7576**	**8.4000e-004**	**0.2461**	**0.0515**	**0.2976**	**0.0373**	**0.0480**	**0.0853**	**0.0000**	**78.6267**	**78.6267**	**0.0213**	**0.0000**	**79.0743**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0231	0.3759	0.2669	8.4000e-004	0.0195	6.1000e-003	0.0256	5.3400e-003	5.6100e-003	0.0110	0.0000	77.5341	77.5341	6.2000e-004	0.0000	77.5470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.0600e-003	0.0214	4.0000e-005	3.4600e-003	3.0000e-005	3.4900e-003	9.2000e-004	3.0000e-005	9.5000e-004	0.0000	3.3538	3.3538	1.9000e-004	0.0000	3.3578
Total	**0.0245**	**0.3779**	**0.2883**	**8.8000e-004**	**0.0229**	**6.1300e-003**	**0.0291**	**6.2600e-003**	**5.6400e-003**	**0.0119**	**0.0000**	**80.8879**	**80.8879**	**8.1000e-004**	**0.0000**	**80.9048**

Mitigated Construction On-Site

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

Fugitive Dust					0.0960	0.0000	0.0960	0.0145	0.0000	0.0145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0947	1.0156	0.7576	8.4000e-004		0.0515	0.0515		0.0480	0.0480	0.0000	78.6266	78.6266	0.0213	0.0000	79.0742
Total	**0.0947**	**1.0156**	**0.7576**	**8.4000e-004**	**0.0960**	**0.0515**	**0.1474**	**0.0145**	**0.0480**	**0.0625**	**0.0000**	**78.6266**	**78.6266**	**0.0213**	**0.0000**	**79.0742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0231	0.3759	0.2669	8.4000e-004	0.0195	6.1000e-003	0.0256	5.3400e-003	5.6100e-003	0.0110	0.0000	77.5341	77.5341	6.2000e-004	0.0000	77.5470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.0600e-003	0.0214	4.0000e-005	3.4600e-003	3.0000e-005	3.4900e-003	9.2000e-004	3.0000e-005	9.5000e-004	0.0000	3.3538	3.3538	1.9000e-004	0.0000	3.3578
Total	**0.0245**	**0.3779**	**0.2883**	**8.8000e-004**	**0.0229**	**6.1300e-003**	**0.0291**	**6.2600e-003**	**5.6400e-003**	**0.0119**	**0.0000**	**80.8879**	**80.8879**	**8.1000e-004**	**0.0000**	**80.9048**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0395	0.4267	0.3197	2.9000e-004		0.0232	0.0232		0.0213	0.0213	0.0000	27.9758	27.9758	8.3500e-003	0.0000	28.1512
Total	**0.0395**	**0.4267**	**0.3197**	**2.9000e-004**	**0.1355**	**0.0232**	**0.1587**	**0.0745**	**0.0213**	**0.0958**	**0.0000**	**27.9758**	**27.9758**	**8.3500e-003**	**0.0000**	**28.1512**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1600e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4373	1.4373	8.0000e-005	0.0000	1.4390
Total	**6.0000e-004**	**8.8000e-004**	**9.1600e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.4373**	**1.4373**	**8.0000e-005**	**0.0000**	**1.4390**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0528	0.0000	0.0528	0.0291	0.0000	0.0291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0395	0.4267	0.3197	2.9000e-004		0.0232	0.0232		0.0213	0.0213	0.0000	27.9758	27.9758	8.3500e-003	0.0000	28.1512
Total	**0.0395**	**0.4267**	**0.3197**	**2.9000e-004**	**0.0528**	**0.0232**	**0.0760**	**0.0291**	**0.0213**	**0.0504**	**0.0000**	**27.9758**	**27.9758**	**8.3500e-003**	**0.0000**	**28.1512**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1600e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4373	1.4373	8.0000e-005	0.0000	1.4390
Total	**6.0000e-004**	**8.8000e-004**	**9.1600e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.4373**	**1.4373**	**8.0000e-005**	**0.0000**	**1.4390**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0434	0.0000	0.0434	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0339	0.3952	0.2542	3.1000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	29.4211	29.4211	8.7800e-003	0.0000	29.6056
Total	**0.0339**	**0.3952**	**0.2542**	**3.1000e-004**	**0.0434**	**0.0190**	**0.0624**	**0.0180**	**0.0175**	**0.0355**	**0.0000**	**29.4211**	**29.4211**	**8.7800e-003**	**0.0000**	**29.6056**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.5000e-004	6.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0647	1.0647	6.0000e-005	0.0000	1.0660

Total	**4.5000e-004**	**6.5000e-004**	**6.7800e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0647**	**1.0647**	**6.0000e-005**	**0.0000**	**1.0660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0169	0.0000	0.0169	7.0100e-003	0.0000	7.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0339	0.3952	0.2542	3.1000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	29.4211	29.4211	8.7800e-003	0.0000	29.6055
Total	**0.0339**	**0.3952**	**0.2542**	**3.1000e-004**	**0.0169**	**0.0190**	**0.0359**	**7.0100e-003**	**0.0175**	**0.0245**	**0.0000**	**29.4211**	**29.4211**	**8.7800e-003**	**0.0000**	**29.6055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.5000e-004	6.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0647	1.0647	6.0000e-005	0.0000	1.0660
Total	**4.5000e-004**	**6.5000e-004**	**6.7800e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0647**	**1.0647**	**6.0000e-005**	**0.0000**	**1.0660**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3549	2.9129	1.8182	2.6000e-003		0.2053	0.2053		0.1931	0.1931	0.0000	236.6745	236.6745	0.0594	0.0000	237.9215
Total	**0.3549**	**2.9129**	**1.8182**	**2.6000e-003**		**0.2053**	**0.2053**		**0.1931**	**0.1931**	**0.0000**	**236.6745**	**236.6745**	**0.0594**	**0.0000**	**237.9215**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4439	4.5269	5.5211	9.5800e-003	0.2709	0.0752	0.3461	0.0773	0.0692	0.1465	0.0000	878.3128	878.3128	7.0100e-003	0.0000	878.4599
Worker	0.4724	0.6921	7.1903	0.0143	1.1632	0.0104	1.1736	0.3089	9.5600e-003	0.3185	0.0000	1,128.7968	1,128.7968	0.0637	0.0000	1,130.1354
Total	**0.9163**	**5.2189**	**12.7115**	**0.0239**	**1.4341**	**0.0856**	**1.5197**	**0.3862**	**0.0787**	**0.4649**	**0.0000**	**2,007.1095**	**2,007.1095**	**0.0708**	**0.0000**	**2,008.5953**

Mitigated Construction On-Site

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

Off-Road	0.3549	2.9129	1.8182	2.6000e-003		0.2053	0.2053		0.1931	0.1931	0.0000	236.6742	236.6742	0.0594	0.0000	237.9212
Total	**0.3549**	**2.9129**	**1.8182**	**2.6000e-003**		**0.2053**	**0.2053**		**0.1931**	**0.1931**	**0.0000**	**236.6742**	**236.6742**	**0.0594**	**0.0000**	**237.9212**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4439	4.5269	5.5211	9.5800e-003	0.2709	0.0752	0.3461	0.0773	0.0692	0.1465	0.0000	878.3128	878.3128	7.0100e-003	0.0000	878.4599
Worker	0.4724	0.6921	7.1903	0.0143	1.1632	0.0104	1.1736	0.3089	9.5600e-003	0.3185	0.0000	1,128.7968	1,128.7968	0.0637	0.0000	1,130.1354
Total	**0.9163**	**5.2189**	**12.7115**	**0.0239**	**1.4341**	**0.0856**	**1.5197**	**0.3862**	**0.0787**	**0.4649**	**0.0000**	**2,007.1095**	**2,007.1095**	**0.0708**	**0.0000**	**2,008.5953**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5272	5.3788	6.9048	0.0129	0.3645	0.0839	0.4484	0.1040	0.0772	0.1812	0.0000	1,168.6421	1,168.6421	8.5200e-003	0.0000	1,168.8210
Worker	0.5719	0.8398	8.7364	0.0192	1.5649	0.0133	1.5782	0.4156	0.0123	0.4279	0.0000	1,466.1576	1,466.1576	0.0789	0.0000	1,467.8147
Total	**1.0992**	**6.2186**	**15.6412**	**0.0321**	**1.9294**	**0.0972**	**2.0267**	**0.5196**	**0.0894**	**0.6091**	**0.0000**	**2,634.7997**	**2,634.7997**	**0.0874**	**0.0000**	**2,636.6357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5272	5.3788	6.9048	0.0129	0.3645	0.0839	0.4484	0.1040	0.0772	0.1812	0.0000	1,168.6421	1,168.6421	8.5200e-003	0.0000	1,168.8210
Worker	0.5719	0.8398	8.7364	0.0192	1.5649	0.0133	1.5782	0.4156	0.0123	0.4279	0.0000	1,466.1576	1,466.1576	0.0789	0.0000	1,467.8147
Total	**1.0992**	**6.2186**	**15.6412**	**0.0321**	**1.9294**	**0.0972**	**2.0267**	**0.5196**	**0.0894**	**0.6091**	**0.0000**	**2,634.7997**	**2,634.7997**	**0.0874**	**0.0000**	**2,636.6357**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4802	4.8761	6.5183	0.0128	0.3633	0.0746	0.4378	0.1037	0.0686	0.1723	0.0000	1,145.3167	1,145.3167	8.2100e-003	0.0000	1,145.4891
Worker	0.5104	0.7554	7.8526	0.0192	1.5589	0.0128	1.5717	0.4140	0.0118	0.4258	0.0000	1,404.4698	1,404.4698	0.0726	0.0000	1,405.9933

Total	**0.9906**	**5.6315**	**14.3709**	**0.0320**	**1.9222**	**0.0874**	**2.0095**	**0.5177**	**0.0804**	**0.5981**	**0.0000**	**2,549.7865**	**2,549.7865**	**0.0808**	**0.0000**	**2,551.4824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4802	4.8761	6.5183	0.0128	0.3633	0.0746	0.4378	0.1037	0.0686	0.1723	0.0000	1,145.3167	1,145.3167	8.2100e-003	0.0000	1,145.4891
Worker	0.5104	0.7554	7.8526	0.0192	1.5589	0.0128	1.5717	0.4140	0.0118	0.4258	0.0000	1,404.4698	1,404.4698	0.0726	0.0000	1,405.9933
Total	**0.9906**	**5.6315**	**14.3709**	**0.0320**	**1.9222**	**0.0874**	**2.0095**	**0.5177**	**0.0804**	**0.5981**	**0.0000**	**2,549.7865**	**2,549.7865**	**0.0808**	**0.0000**	**2,551.4824**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1788	1.5585	1.1747	1.8000e-003		0.1001	0.1001		0.0941	0.0941	0.0000	158.6357	158.6357	0.0388	0.0000	159.4509
Total	**0.1788**	**1.5585**	**1.1747**	**1.8000e-003**		**0.1001**	**0.1001**		**0.0941**	**0.0941**	**0.0000**	**158.6357**	**158.6357**	**0.0388**	**0.0000**	**159.4509**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2316	2.3066	3.2186	6.5900e-003	0.1872	0.0362	0.2234	0.0534	0.0333	0.0868	0.0000	580.3758	580.3758	4.2100e-003	0.0000	580.4642
Worker	0.2363	0.3532	3.6653	9.8600e-003	0.8034	6.4100e-003	0.8099	0.2134	5.9300e-003	0.2193	0.0000	696.8245	696.8245	0.0347	0.0000	697.5532
Total	**0.4679**	**2.6598**	**6.8839**	**0.0165**	**0.9907**	**0.0426**	**1.0333**	**0.2668**	**0.0393**	**0.3061**	**0.0000**	**1,277.2002**	**1,277.2002**	**0.0389**	**0.0000**	**1,278.0174**

Mitigated Construction On-Site

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

Off-Road	0.1788	1.5585	1.1747	1.8000e-003		0.1001	0.1001		0.0941	0.0941	0.0000	158.6355	158.6355	0.0388	0.0000	159.4507
Total	**0.1788**	**1.5585**	**1.1747**	**1.8000e-003**		**0.1001**	**0.1001**		**0.0941**	**0.0941**	**0.0000**	**158.6355**	**158.6355**	**0.0388**	**0.0000**	**159.4507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2316	2.3066	3.2186	6.5900e-003	0.1872	0.0362	0.2234	0.0534	0.0333	0.0868	0.0000	580.3758	580.3758	4.2100e-003	0.0000	580.4642
Worker	0.2363	0.3532	3.6653	9.8600e-003	0.8034	6.4100e-003	0.8099	0.2134	5.9300e-003	0.2193	0.0000	696.8245	696.8245	0.0347	0.0000	697.5532
Total	**0.4679**	**2.6598**	**6.8839**	**0.0165**	**0.9907**	**0.0426**	**1.0333**	**0.2668**	**0.0393**	**0.3061**	**0.0000**	**1,277.2002**	**1,277.2002**	**0.0389**	**0.0000**	**1,278.0174**

3.6 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	2.5123					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.2076	0.1648	2.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	22.3410	22.3410	2.6300e-003	0.0000	22.3963
Total	**2.5446**	**0.2076**	**0.1648**	**2.6000e-004**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**22.3410**	**22.3410**	**2.6300e-003**	**0.0000**	**22.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0768	0.1128	1.1737	2.5800e-003	0.2102	1.7900e-003	0.2120	0.0558	1.6500e-003	0.0575	0.0000	196.9709	196.9709	0.0106	0.0000	197.1936
Total	**0.0768**	**0.1128**	**1.1737**	**2.5800e-003**	**0.2102**	**1.7900e-003**	**0.2120**	**0.0558**	**1.6500e-003**	**0.0575**	**0.0000**	**196.9709**	**196.9709**	**0.0106**	**0.0000**	**197.1936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5123					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.2076	0.1648	2.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	22.3409	22.3409	2.6300e-003	0.0000	22.3963
Total	**2.5446**	**0.2076**	**0.1648**	**2.6000e-004**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**22.3409**	**22.3409**	**2.6300e-003**	**0.0000**	**22.3963**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0768	0.1128	1.1737	2.5800e-003	0.2102	1.7900e-003	0.2120	0.0558	1.6500e-003	0.0575	0.0000	196.9709	196.9709	0.0106	0.0000	197.1936
Total	**0.0768**	**0.1128**	**1.1737**	**2.5800e-003**	**0.2102**	**1.7900e-003**	**0.2120**	**0.0558**	**1.6500e-003**	**0.0575**	**0.0000**	**196.9709**	**196.9709**	**0.0106**	**0.0000**	**197.1936**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**3.7758**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1023	0.1514	1.5734	3.8400e-003	0.3124	2.5600e-003	0.3149	0.0830	2.3600e-003	0.0853	0.0000	281.4080	281.4080	0.0145	0.0000	281.7132

Total	**0.1023**	**0.1514**	**1.5734**	**3.8400e-003**	**0.3124**	**2.5600e-003**	**0.3149**	**0.0830**	**2.3600e-003**	**0.0853**	**0.0000**	**281.4080**	**281.4080**	**0.0145**	**0.0000**	**281.7132**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**3.7758**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1023	0.1514	1.5734	3.8400e-003	0.3124	2.5600e-003	0.3149	0.0830	2.3600e-003	0.0853	0.0000	281.4080	281.4080	0.0145	0.0000	281.7132
Total	**0.1023**	**0.1514**	**1.5734**	**3.8400e-003**	**0.3124**	**2.5600e-003**	**0.3149**	**0.0830**	**2.3600e-003**	**0.0853**	**0.0000**	**281.4080**	**281.4080**	**0.0145**	**0.0000**	**281.7132**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1304	0.1205	1.9000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	16.5962	16.5962	1.5800e-003	0.0000	16.6293
Total	**1.8857**	**0.1304**	**0.1205**	**1.9000e-004**		**9.7900e-003**	**9.7900e-003**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**16.5962**	**16.5962**	**1.5800e-003**	**0.0000**	**16.6293**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0459	0.0687	0.7125	1.9200e-003	0.1562	1.2500e-003	0.1574	0.0415	1.1500e-003	0.0426	0.0000	135.4522	135.4522	6.7500e-003	0.0000	135.5938
Total	**0.0459**	**0.0687**	**0.7125**	**1.9200e-003**	**0.1562**	**1.2500e-003**	**0.1574**	**0.0415**	**1.1500e-003**	**0.0426**	**0.0000**	**135.4522**	**135.4522**	**6.7500e-003**	**0.0000**	**135.5938**

Mitigated Construction On-Site

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

Archit. Coating	1.8663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1304	0.1205	1.9000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	16.5962	16.5962	1.5800e-003	0.0000	16.6293
Total	**1.8857**	**0.1304**	**0.1205**	**1.9000e-004**		**9.7900e-003**	**9.7900e-003**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**16.5962**	**16.5962**	**1.5800e-003**	**0.0000**	**16.6293**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0459	0.0687	0.7125	1.9200e-003	0.1562	1.2500e-003	0.1574	0.0415	1.1500e-003	0.0426	0.0000	135.4522	135.4522	6.7500e-003	0.0000	135.5938
Total	**0.0459**	**0.0687**	**0.7125**	**1.9200e-003**	**0.1562**	**1.2500e-003**	**0.1574**	**0.0415**	**1.1500e-003**	**0.0426**	**0.0000**	**135.4522**	**135.4522**	**6.7500e-003**	**0.0000**	**135.5938**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0612	0.6522	0.5508	8.5000e-004		0.0357	0.0357		0.0328	0.0328	0.0000	77.4012	77.4012	0.0241	0.0000	77.9072
Paving	0.0328					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0940**	**0.6522**	**0.5508**	**8.5000e-004**		**0.0357**	**0.0357**		**0.0328**	**0.0328**	**0.0000**	**77.4012**	**77.4012**	**0.0241**	**0.0000**	**77.9072**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	2.7500e-003	0.0285	8.0000e-005	6.2500e-003	5.0000e-005	6.3000e-003	1.6600e-003	5.0000e-005	1.7100e-003	0.0000	5.4238	5.4238	2.7000e-004	0.0000	5.4295
Total	**1.8400e-003**	**2.7500e-003**	**0.0285**	**8.0000e-005**	**6.2500e-003**	**5.0000e-005**	**6.3000e-003**	**1.6600e-003**	**5.0000e-005**	**1.7100e-003**	**0.0000**	**5.4238**	**5.4238**	**2.7000e-004**	**0.0000**	**5.4295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0612	0.6522	0.5508	8.5000e-004		0.0357	0.0357		0.0328	0.0328	0.0000	77.4011	77.4011	0.0241	0.0000	77.9071
Paving	0.0328					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0940**	**0.6522**	**0.5508**	**8.5000e-004**		**0.0357**	**0.0357**		**0.0328**	**0.0328**	**0.0000**	**77.4011**	**77.4011**	**0.0241**	**0.0000**	**77.9071**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	2.7500e-003	0.0285	8.0000e-005	6.2500e-003	5.0000e-005	6.3000e-003	1.6600e-003	5.0000e-005	1.7100e-003	0.0000	5.4238	5.4238	2.7000e-004	0.0000	5.4295
Total	**1.8400e-003**	**2.7500e-003**	**0.0285**	**8.0000e-005**	**6.2500e-003**	**5.0000e-005**	**6.3000e-003**	**1.6600e-003**	**5.0000e-005**	**1.7100e-003**	**0.0000**	**5.4238**	**5.4238**	**2.7000e-004**	**0.0000**	**5.4295**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	10.5064	26.1384	104.8312	0.2498	16.8314	0.3579	17.1893	4.5040	0.3298	4.8338	0.0000	18,719.8399	18,719.8399	0.7260	0.0000	18,735.0865
Unmitigated	10.5064	26.1384	104.8312	0.2498	16.8314	0.3579	17.1893	4.5040	0.3298	4.8338	0.0000	18,719.8399	18,719.8399	0.7260	0.0000	18,735.0865

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	44,414,001	44,414,001
Total	17,787.00	27,405.00	27,405.00	44,414,001	44,414,001

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,646.5401	2,646.5401	0.1217	0.0252	2,656.8974
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,313.0457	3,313.0457	0.1523	0.0315	3,326.0113
NaturalGas Mitigated	5.2700e-003	0.0480	0.0403	2.9000e-004		3.6400e-003	3.6400e-003		3.6400e-003	3.6400e-003	0.0000	52.2032	52.2032	1.0000e-003	9.6000e-004	52.5209
NaturalGas Unmitigated	6.4200e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	63.5029	63.5029	1.2200e-003	1.1600e-003	63.8894

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.19e+006	6.4200e-003	0.0583	0.0490	3.5000e-004		4.4300e-003	4.4300e-003		4.4300e-003	4.4300e-003	0.0000	63.5029	63.5029	1.2200e-003	1.1600e-003	63.8894
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.4200e-003**	**0.0583**	**0.0490**	**3.5000e-004**		**4.4300e-003**	**4.4300e-003**		**4.4300e-003**	**4.4300e-003**	**0.0000**	**63.5029**	**63.5029**	**1.2200e-003**	**1.1600e-003**	**63.8894**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	978250	5.2700e-003	0.0480	0.0403	2.9000e-004		3.6400e-003	3.6400e-003		3.6400e-003	3.6400e-003	0.0000	52.2032	52.2032	1.0000e-003	9.6000e-004	52.5209
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.2700e-003**	**0.0480**	**0.0403**	**2.9000e-004**		**3.6400e-003**	**3.6400e-003**		**3.6400e-003**	**3.6400e-003**	**0.0000**	**52.2032**	**52.2032**	**1.0000e-003**	**9.6000e-004**	**52.5209**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	958320	274.2395	0.0126	2.6100e-003	275.3127
Regional Shopping Center	1.0619e+007	3,038.8062	0.1397	0.0289	3,050.6986
Total		**3,313.0457**	**0.1523**	**0.0315**	**3,326.0113**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	718740	205.6796	9.4500e-003	1.9600e-003	206.4845
Regional Shopping Center	8.5295e+006	2,440.8605	0.1122	0.0232	2,450.4128
Total		**2,646.5401**	**0.1217**	**0.0252**	**2,656.8974**

6.0 Area Detail

6.1 Mitigation Measures Area

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

Mitigated	10.8182	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Unmitigated	10.8182	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.0061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Total	**10.8182**	**9.0000e-005**	**9.6700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0196**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8111					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.0061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Total	**10.8182**	**9.0000e-005**	**9.6700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0196**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	273.5877	1.5325	0.0384	317.6635
Unmitigated	310.6921	1.7031	0.0427	359.6915

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	51.8508 / 31.7795	310.6921	1.7031	0.0427	359.6915
Total		**310.6921**	**1.7031**	**0.0427**	**359.6915**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	46.6657 / 28.6016	273.5877	1.5325	0.0384	317.6635
Total		**273.5877**	**1.5325**	**0.0384**	**317.6635**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	149.1984	8.8174	0.0000	334.3631
Unmitigated	149.1984	8.8174	0.0000	334.3631

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	735	149.1984	8.8174	0.0000	334.3631
Total		**149.1984**	**8.8174**	**0.0000**	**334.3631**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	735	149.1984	8.8174	0.0000	334.3631
Total		**149.1984**	**8.8174**	**0.0000**	**334.3631**

9.0 Operational Offroad

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

10.0 Vegetation

Irwindale Regional Shopping Center - BAU

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun. Increased trip lengths by 2% per the Scoping Plan efficiency reductions

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Energy Use -

Water And Wastewater - Increased the water usage rate by 10% to account for Title 24 efficiencies.

Solid Waste - Increased the waste rate by 10% to account for Title 24 efficiencies.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	735.00	809.00
tblVehicleTrips	CC_TL	8.40	8.60
tblVehicleTrips	CNW_TL	6.90	7.00
tblVehicleTrips	CW_TL	16.60	16.90
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41
tblWater	IndoorWaterUseRate	51,850,765.04	57,035,842.00

tblWater	OutdoorWaterUseRate	31,779,501.15	34,957,451.00

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					
2015	12.9904	80.9514	146.2527	0.2806	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	26,171.9514	26,171.9514	1.9497	0.0000	26,212.8945
2016	41.7414	77.1375	150.7758	0.3144	17.5024	2.9268	20.4292	4.6973	2.7465	7.4438	0.0000	28,464.2446	28,464.2446	1.5664	0.0000	28,497.1385
2017	40.5336	70.6600	139.6057	0.3142	17.5033	2.6438	20.1471	4.6976	2.4806	7.1782	0.0000	27,677.1772	27,677.1772	1.4866	0.0000	27,708.3947
2018	39.3674	63.8305	129.9430	0.3140	17.5033	2.2982	19.8015	4.6976	2.1569	6.8545	0.0000	26,925.3635	26,925.3635	1.4191	0.0000	26,955.1648
Total	**134.6327**	**292.5794**	**566.5773**	**1.2233**	**70.7764**	**11.6729**	**81.7352**	**24.0766**	**10.8838**	**34.3034**	**0.0000**	**109,238.7367**	**109,238.7367**	**6.4217**	**0.0000**	**109,373.5925**

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					
2015	12.9904	80.9514	146.2527	0.2806	15.0536	3.8042	18.0493	4.0477	3.4998	6.8460	0.0000	26,171.9514	26,171.9514	1.9497	0.0000	26,212.8945
2016	41.7414	77.1375	150.7758	0.3144	17.5024	2.9268	20.4292	4.6973	2.7465	7.4438	0.0000	28,464.2446	28,464.2446	1.5664	0.0000	28,497.1385
2017	40.5336	70.6600	139.6057	0.3142	17.5033	2.6438	20.1471	4.6976	2.4806	7.1782	0.0000	27,677.1772	27,677.1772	1.4866	0.0000	27,708.3947

2018	39.3674	63.8305	129.9430	0.3140	17.5033	2.2982	19.8015	4.6976	2.1569	6.8545	0.0000	26,925.3635	26,925.3635	1.4191	0.0000	26,955.1648
Total	**134.6327**	**292.5794**	**566.5773**	**1.2233**	**67.5625**	**11.6729**	**78.4270**	**18.1403**	**10.8838**	**28.3225**	**0.0000**	**109,238.7367**	**109,238.7367**	**6.4217**	**0.0000**	**109,373.5924**

	ROG	NOx	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**	**4.54**	**0.00**	**4.05**	**24.66**	**0.00**	**17.44**	**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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
Mobile	78.9644	182.4139	764.8428	1.9442	128.3246	2.6716	130.9961	34.2875	2.4616	36.7491		160,327.9352	160,327.9352	5.9802		160,453.5188
Total	**139.8898**	**182.7568**	**765.2076**	**1.9463**	**128.3246**	**2.6979**	**131.0224**	**34.2875**	**2.4879**	**36.7754**		**160,738.7354**	**160,738.7354**	**5.9885**	**7.5300e-003**	**160,866.8275**

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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

Mobile	78.9644	182.4139	764.8428	1.9442	128.3246	2.6716	130.9961	34.2875	2.4616	36.7491		160,327.9352	160,327.9352	5.9802		160,453.5188
Total	**139.8898**	**182.7568**	**765.2076**	**1.9463**	**128.3246**	**2.6979**	**131.0224**	**34.2875**	**2.4879**	**36.7754**		**160,738.7354**	**160,738.7354**	**5.9885**	**7.5300e-003**	**160,866.8275**

	ROG	NOx	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	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

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					11.7185	0.0000	11.7185	1.7743	0.0000	1.7743			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**11.7185**	**2.4508**	**14.1693**	**1.7743**	**2.2858**	**4.0601**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.0570	16.9810	11.3914	0.0400	0.9430	0.2900	1.2330	0.2582	0.2667	0.5249		4,073.8942	4,073.8942	0.0322		4,074.5699
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	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**1.1262**	**17.0676**	**12.4659**	**0.0421**	**1.1107**	**0.2915**	**1.4021**	**0.3027**	**0.2681**	**0.5707**		**4,258.6989**	**4,258.6989**	**0.0421**		**4,259.5834**

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					4.5702	0.0000	4.5702	0.6920	0.0000	0.6920			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**4.5702**	**2.4508**	**7.0210**	**0.6920**	**2.2858**	**2.9778**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.0570	16.9810	11.3914	0.0400	0.9430	0.2900	1.2330	0.2582	0.2667	0.5249		4,073.8942	4,073.8942	0.0322		4,074.5699
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	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**1.1262**	**17.0676**	**12.4659**	**0.0421**	**1.1107**	**0.2915**	**1.4021**	**0.3027**	**0.2681**	**0.5707**		**4,258.6989**	**4,258.6989**	**0.0421**		**4,259.5834**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

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	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

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	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	**0.0830**	**0.1039**	**1.2894**	**2.5500e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**221.7657**	**221.7657**	**0.0119**		**222.0162**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**3.3826**	**3.8022**	**7.1848**	**1.4026**	**3.4980**	**4.9006**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	**0.0922**	**0.1154**	**1.4326**	**2.8300e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**246.4063**	**246.4063**	**0.0133**		**246.6847**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.2904	44.6132	49.2149	0.0989	2.8364	0.7714	3.6079	0.8077	0.7093	1.5170		10,016.2678	10,016.2678	0.0787		10,017.9205
Worker	5.0410	6.3083	78.2933	0.1549	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		13,466.1065	13,466.1065	0.7244		13,481.3186
Total	**9.3314**	**50.9215**	**127.5082**	**0.2538**	**15.0536**	**0.8789**	**15.9325**	**4.0477**	**0.8079**	**4.8556**		**23,482.3743**	**23,482.3743**	**0.8031**		**23,499.2391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.2904	44.6132	49.2149	0.0989	2.8364	0.7714	3.6079	0.8077	0.7093	1.5170		10,016.2678	10,016.2678	0.0787		10,017.9205
Worker	5.0410	6.3083	78.2933	0.1549	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		13,466.1065	13,466.1065	0.7244		13,481.3186
Total	**9.3314**	**50.9215**	**127.5082**	**0.2538**	**15.0536**	**0.8789**	**15.9325**	**4.0477**	**0.8079**	**4.8556**		**23,482.3743**	**23,482.3743**	**0.8031**		**23,499.2391**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7925	39.4281	45.2846	0.0988	2.8373	0.6402	3.4775	0.8080	0.5888	1.3968		9,906.1869	9,906.1869	0.0711		9,907.6794
Worker	4.5501	5.6907	70.8956	0.1548	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		13,002.1375	13,002.1375	0.6665		13,016.1348
Total	**8.3426**	**45.1188**	**116.1802**	**0.2536**	**15.0545**	**0.7423**	**15.7968**	**4.0481**	**0.6826**	**4.7307**		**22,908.3243**	**22,908.3243**	**0.7376**		**22,923.8142**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7925	39.4281	45.2846	0.0988	2.8373	0.6402	3.4775	0.8080	0.5888	1.3968		9,906.1869	9,906.1869	0.0711		9,907.6794
Worker	4.5501	5.6907	70.8956	0.1548	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		13,002.1375	13,002.1375	0.6665		13,016.1348
Total	**8.3426**	**45.1188**	**116.1802**	**0.2536**	**15.0545**	**0.7423**	**15.7968**	**4.0481**	**0.6826**	**4.7307**		**22,908.3243**	**22,908.3243**	**0.7376**		**22,923.8142**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4763	35.9007	42.5895	0.0987	2.8382	0.5713	3.4095	0.8084	0.5254	1.3338		9,745.8890	9,745.8890	0.0687		9,747.3323
Worker	4.0906	5.1390	64.1629	0.1547	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		12,504.5489	12,504.5489	0.6152		12,517.4670
Total	**7.5669**	**41.0397**	**106.7524**	**0.2534**	**15.0554**	**0.6696**	**15.7249**	**4.0484**	**0.6161**	**4.6645**		**22,250.4378**	**22,250.4378**	**0.6839**		**22,264.7993**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.4763	35.9007	42.5895	0.0987	2.8382	0.5713	3.4095	0.8084	0.5254	1.3338		9,745.8890	9,745.8890	0.0687		9,747.3323
Worker	4.0906	5.1390	64.1629	0.1547	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		12,504.5489	12,504.5489	0.6152		12,517.4670
Total	**7.5669**	**41.0397**	**106.7524**	**0.2534**	**15.0554**	**0.6696**	**15.7249**	**4.0484**	**0.6161**	**4.6645**		**22,250.4378**	**22,250.4378**	**0.6839**		**22,264.7993**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

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	3.2609	32.9677	40.5770	0.0986	2.8383	0.5385	3.3767	0.8084	0.4953	1.3037		9,582.4590	9,582.4590	0.0683		9,583.8937
Worker	3.6879	4.6621	58.2982	0.1547	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		12,039.2592	12,039.2592	0.5710		12,051.2491

Total	**6.9488**	**37.6298**	**98.8752**	**0.2532**	**15.0554**	**0.6342**	**15.6896**	**4.0484**	**0.5838**	**4.6323**		**21,621.7182**	**21,621.7182**	**0.6393**		**21,635.1428**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

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	3.2609	32.9677	40.5770	0.0986	2.8383	0.5385	3.3767	0.8084	0.4953	1.3037		9,582.4590	9,582.4590	0.0683		9,583.8937
Worker	3.6879	4.6621	58.2982	0.1547	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		12,039.2592	12,039.2592	0.5710		12,051.2491
Total	**6.9488**	**37.6298**	**98.8752**	**0.2532**	**15.0554**	**0.6342**	**15.6896**	**4.0484**	**0.5838**	**4.6323**		**21,621.7182**	**21,621.7182**	**0.6393**		**21,635.1428**

3.6 Architectural Coating - 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	28.7124					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	**29.0809**	**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	0.9117	1.1402	14.2051	0.0310	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,605.1858	2,605.1858	0.1336		2,607.9904
Total	**0.9117**	**1.1402**	**14.2051**	**0.0310**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,605.1858**	**2,605.1858**	**0.1336**		**2,607.9904**

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	28.7124					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	**29.0809**	**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	0.9117	1.1402	14.2051	0.0310	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,605.1858	2,605.1858	0.1336		2,607.9904
Total	**0.9117**	**1.1402**	**14.2051**	**0.0310**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,605.1858**	**2,605.1858**	**0.1336**		**2,607.9904**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					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	**29.0447**	**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	0.8196	1.0297	12.8561	0.0310	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,505.4860	2,505.4860	0.1233		2,508.0744
Total	**0.8196**	**1.0297**	**12.8561**	**0.0310**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,505.4860**	**2,505.4860**	**0.1233**		**2,508.0744**

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	28.7124					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	**29.0447**	**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	0.8196	1.0297	12.8561	0.0310	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,505.4860	2,505.4860	0.1233		2,508.0744
Total	**0.8196**	**1.0297**	**12.8561**	**0.0310**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,505.4860**	**2,505.4860**	**0.1233**		**2,508.0744**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7389	0.9341	11.6810	0.0310	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,412.2578	2,412.2578	0.1144		2,414.6602
Total	**0.7389**	**0.9341**	**11.6810**	**0.0310**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,412.2578**	**2,412.2578**	**0.1144**		**2,414.6602**

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	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7389	0.9341	11.6810	0.0310	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,412.2578	2,412.2578	0.1144		2,414.6602
Total	**0.7389**	**0.9341**	**11.6810**	**0.0310**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,412.2578**	**2,412.2578**	**0.1144**		**2,414.6602**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0506	0.0640	0.8001	2.1200e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		165.2231	165.2231	7.8400e-003		165.3877
Total	**0.0506**	**0.0640**	**0.8001**	**2.1200e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**165.2231**	**165.2231**	**7.8400e-003**		**165.3877**

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	78.9644	182.4139	764.8428	1.9442	128.3246	2.6716	130.9961	34.2875	2.4616	36.7491		160,327.9352	160,327.9352	5.9802		160,453.5188
Unmitigated	78.9644	182.4139	764.8428	1.9442	128.3246	2.6716	130.9961	34.2875	2.4616	36.7491		160,327.9352	160,327.9352	5.9802		160,453.5188

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	45,339,416	45,339,416
Total	17,787.00	27,405.00	27,405.00	45,339,416	45,339,416

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.90	8.60	7.00	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
NaturalGas Unmitigated	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

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					
Regional Shopping Center	3490.41	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0376**	**0.3422**	**0.2875**	**2.0500e-003**		**0.0260**	**0.0260**		**0.0260**	**0.0260**		**410.6366**	**410.6366**	**7.8700e-003**	**7.5300e-003**	**413.1357**

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					
Regional Shopping Center	3.49041	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0376**	**0.3422**	**0.2875**	**2.0500e-003**		**0.0260**	**0.0260**		**0.0260**	**0.0260**		**410.6366**	**410.6366**	**7.8700e-003**	**7.5300e-003**	**413.1357**

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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Unmitigated	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

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	6.0521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

Total	**60.8877**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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	6.0521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**60.8877**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Irwindale Regional Shopping Center - BAU

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun. Increased trip lengths by 2% per the Scoping Plan efficiency reductions

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Energy Use -

Water And Wastewater - Increased the water usage rate by 10% to account for Title 24 efficiencies.

Solid Waste - Increased the waste rate by 10% to account for Title 24 efficiencies.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	735.00	809.00
tblVehicleTrips	CC_TL	8.40	8.60
tblVehicleTrips	CNW_TL	6.90	7.00
tblVehicleTrips	CW_TL	16.60	16.90
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41
tblWater	IndoorWaterUseRate	51,850,765.04	57,035,842.00

tblWater	OutdoorWaterUseRate	31,779,501.15	34,957,451.00

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					
2015	13.5353	82.7337	149.5322	0.2702	18.2675	3.8042	21.3575	9.9840	3.4998	12.8269	0.0000	25,253.4790	25,253.4790	1.9497	0.0000	25,294.4220
2016	42.2277	78.8058	153.2026	0.3020	17.5024	2.9334	20.4358	4.6973	2.7526	7.4499	0.0000	27,411.8277	27,411.8277	1.5685	0.0000	27,444.7658
2017	40.9526	72.1513	142.3432	0.3018	17.5033	2.6494	20.1527	4.6976	2.4857	7.1834	0.0000	26,661.0108	26,661.0108	1.4887	0.0000	26,692.2732
2018	39.7340	65.1743	132.9282	0.3016	17.5033	2.3033	19.8066	4.6976	2.1616	6.8592	0.0000	25,943.3205	25,943.3205	1.4213	0.0000	25,973.1679
Total	**136.4496**	**298.8652**	**578.0061**	**1.1757**	**70.7764**	**11.6903**	**81.7526**	**24.0766**	**10.8997**	**34.3193**	**0.0000**	**105,269.6379**	**105,269.6379**	**6.4282**	**0.0000**	**105,404.6290**

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					
2015	13.5353	82.7337	149.5322	0.2702	15.0536	3.8042	18.0587	4.0477	3.4998	6.8547	0.0000	25,253.4790	25,253.4790	1.9497	0.0000	25,294.4220
2016	42.2277	78.8058	153.2026	0.3020	17.5024	2.9334	20.4358	4.6973	2.7526	7.4499	0.0000	27,411.8277	27,411.8277	1.5685	0.0000	27,444.7658
2017	40.9526	72.1513	142.3432	0.3018	17.5033	2.6494	20.1527	4.6976	2.4857	7.1834	0.0000	26,661.0108	26,661.0108	1.4887	0.0000	26,692.2732

2018	39.7340	65.1743	132.9282	0.3016	17.5033	2.3033	19.8066	4.6976	2.1616	6.8592	0.0000	25,943.3205	25,943.3205	1.4213	0.0000	25,973.1679
Total	**136.4496**	**298.8652**	**578.0061**	**1.1757**	**67.5625**	**11.6903**	**78.4538**	**18.1403**	**10.8997**	**28.3471**	**0.0000**	**105,269.6379**	**105,269.6379**	**6.4282**	**0.0000**	**105,404.6290**

	ROG	NOx	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**	**4.54**	**0.00**	**4.04**	**24.66**	**0.00**	**17.40**	**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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
Mobile	81.9971	191.1977	775.2873	1.8472	128.3246	2.6858	131.0103	34.2875	2.4747	36.7622		152,643.9474	152,643.9474	5.9880		152,769.6946
Total	**142.9224**	**191.5406**	**775.6521**	**1.8493**	**128.3246**	**2.7120**	**131.0366**	**34.2875**	**2.5009**	**36.7885**		**153,054.7476**	**153,054.7476**	**5.9963**	**7.5300e-003**	**153,183.0032**

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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Energy	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

Mobile	81.9971	191.1977	775.2873	1.8472	128.3246	2.6858	131.0103	34.2875	2.4747	36.7622		152,643.9474	152,643.9474	5.9880		152,769.6946
Total	**142.9224**	**191.5406**	**775.6521**	**1.8493**	**128.3246**	**2.7120**	**131.0366**	**34.2875**	**2.5009**	**36.7885**		**153,054.7476**	**153,054.7476**	**5.9963**	**7.5300e-003**	**153,183.0032**

	ROG	NOx	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	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

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					11.7185	0.0000	11.7185	1.7743	0.0000	1.7743			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**11.7185**	**2.4508**	**14.1693**	**1.7743**	**2.2858**	**4.0601**		**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.1189	17.5974	12.9202	0.0399	0.9430	0.2910	1.2340	0.2582	0.2676	0.5258		4,064.2474	4,064.2474	0.0326		4,064.9316
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	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**1.1898**	**17.6925**	**13.9140**	**0.0419**	**1.1107**	**0.2924**	**1.4031**	**0.3027**	**0.2690**	**0.5717**		**4,237.5940**	**4,237.5940**	**0.0425**		**4,238.4869**

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					4.5702	0.0000	4.5702	0.6920	0.0000	0.6920			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	**4.5083**	**48.3629**	**36.0738**	**0.0399**	**4.5702**	**2.4508**	**7.0210**	**0.6920**	**2.2858**	**2.9778**	**0.0000**	**4,127.1934**	**4,127.1934**	**1.1188**		**4,150.6886**

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	1.1189	17.5974	12.9202	0.0399	0.9430	0.2910	1.2340	0.2582	0.2676	0.5258		4,064.2474	4,064.2474	0.0326		4,064.9316
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	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**1.1898**	**17.6925**	**13.9140**	**0.0419**	**1.1107**	**0.2924**	**1.4031**	**0.3027**	**0.2690**	**0.5717**		**4,237.5940**	**4,237.5940**	**0.0425**		**4,238.4869**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**18.0663**	**3.0883**	**21.1545**	**9.9307**	**2.8412**	**12.7719**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

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	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	**0.0850**	**0.1141**	**1.1926**	**2.3900e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**208.0159**	**208.0159**	**0.0119**		**208.2664**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.0458**	**3.0883**	**10.1341**	**3.8730**	**2.8412**	**6.7142**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

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	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	**0.0850**	**0.1141**	**1.1926**	**2.3900e-003**	**0.2012**	**1.7700e-003**	**0.2030**	**0.0534**	**1.6200e-003**	**0.0550**		**208.0159**	**208.0159**	**0.0119**		**208.2664**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**8.6733**	**3.8022**	**12.4755**	**3.5965**	**3.4980**	**7.0945**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	**0.0945**	**0.1268**	**1.3251**	**2.6600e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**231.1287**	**231.1287**	**0.0133**		**231.4071**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**3.3826**	**3.8022**	**7.1848**	**1.4026**	**3.4980**	**4.9006**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

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	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	**0.0945**	**0.1268**	**1.3251**	**2.6600e-003**	**0.2236**	**1.9700e-003**	**0.2255**	**0.0593**	**1.8000e-003**	**0.0611**		**231.1287**	**231.1287**	**0.0133**		**231.4071**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.7127	45.7729	58.3716	0.0983	2.8364	0.7809	3.6173	0.8077	0.7180	1.5257		9,932.7163	9,932.7163	0.0809		9,934.4154
Worker	5.1636	6.9309	72.4161	0.1452	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		12,631.1856	12,631.1856	0.7244		12,646.3977
Total	**9.8763**	**52.7038**	**130.7876**	**0.2434**	**15.0536**	**0.8884**	**15.9420**	**4.0477**	**0.8166**	**4.8643**		**22,563.9018**	**22,563.9018**	**0.8053**		**22,580.8131**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

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	4.7127	45.7729	58.3716	0.0983	2.8364	0.7809	3.6173	0.8077	0.7180	1.5257		9,932.7163	9,932.7163	0.0809		9,934.4154
Worker	5.1636	6.9309	72.4161	0.1452	12.2172	0.1075	12.3247	3.2401	0.0986	3.3386		12,631.1856	12,631.1856	0.7244		12,646.3977
Total	**9.8763**	**52.7038**	**130.7876**	**0.2434**	**15.0536**	**0.8884**	**15.9420**	**4.0477**	**0.8166**	**4.8643**		**22,563.9018**	**22,563.9018**	**0.8053**		**22,580.8131**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1568	40.4239	54.3542	0.0981	2.8373	0.6468	3.4842	0.8080	0.5948	1.4029		9,823.1727	9,823.1727	0.0732		9,824.7096
Worker	4.6517	6.2509	65.3616	0.1451	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		12,194.5481	12,194.5481	0.6665		12,208.5454
Total	**8.8085**	**46.6748**	**119.7158**	**0.2432**	**15.0545**	**0.7490**	**15.8034**	**4.0481**	**0.6887**	**4.7368**		**22,017.7208**	**22,017.7208**	**0.7397**		**22,033.2550**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	4.1568	40.4239	54.3542	0.0981	2.8373	0.6468	3.4842	0.8080	0.5948	1.4029		9,823.1727	9,823.1727	0.0732		9,824.7096
Worker	4.6517	6.2509	65.3616	0.1451	12.2172	0.1021	12.3193	3.2401	0.0939	3.3339		12,194.5481	12,194.5481	0.6665		12,208.5454
Total	**8.8085**	**46.6748**	**119.7158**	**0.2432**	**15.0545**	**0.7490**	**15.8034**	**4.0481**	**0.6887**	**4.7368**		**22,017.7208**	**22,017.7208**	**0.7397**		**22,033.2550**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7969	36.7864	51.6004	0.0980	2.8382	0.5769	3.4151	0.8084	0.5306	1.3390		9,664.0196	9,664.0196	0.0709		9,665.5079
Worker	4.1726	5.6435	58.9367	0.1450	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		11,726.2053	11,726.2053	0.6152		11,739.1234
Total	**7.9695**	**42.4299**	**110.5371**	**0.2430**	**15.0554**	**0.6752**	**15.7306**	**4.0484**	**0.6213**	**4.6697**		**21,390.2250**	**21,390.2250**	**0.6860**		**21,404.6314**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.7969	36.7864	51.6004	0.0980	2.8382	0.5769	3.4151	0.8084	0.5306	1.3390		9,664.0196	9,664.0196	0.0709		9,665.5079
Worker	4.1726	5.6435	58.9367	0.1450	12.2172	0.0983	12.3154	3.2401	0.0906	3.3307		11,726.2053	11,726.2053	0.6152		11,739.1234
Total	**7.9695**	**42.4299**	**110.5371**	**0.2430**	**15.0554**	**0.6752**	**15.7306**	**4.0484**	**0.6213**	**4.6697**		**21,390.2250**	**21,390.2250**	**0.6860**		**21,404.6314**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

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	3.5496	33.7638	49.5158	0.0979	2.8383	0.5436	3.3819	0.8084	0.5000	1.3084		9,501.7919	9,501.7919	0.0705		9,503.2728
Worker	3.7528	5.1184	53.3383	0.1449	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		11,288.3416	11,288.3416	0.5710		11,300.3315

Total	**7.3024**	**38.8822**	**102.8541**	**0.2428**	**15.0554**	**0.6393**	**15.6947**	**4.0484**	**0.5885**	**4.6370**		**20,790.1335**	**20,790.1335**	**0.6415**		**20,803.6042**

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	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

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	3.5496	33.7638	49.5158	0.0979	2.8383	0.5436	3.3819	0.8084	0.5000	1.3084		9,501.7919	9,501.7919	0.0705		9,503.2728
Worker	3.7528	5.1184	53.3383	0.1449	12.2172	0.0957	12.3128	3.2401	0.0885	3.3286		11,288.3416	11,288.3416	0.5710		11,300.3315
Total	**7.3024**	**38.8822**	**102.8541**	**0.2428**	**15.0554**	**0.6393**	**15.6947**	**4.0484**	**0.5885**	**4.6370**		**20,790.1335**	**20,790.1335**	**0.6415**		**20,803.6042**

3.6 Architectural Coating - 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	28.7124					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	**29.0809**	**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	0.9321	1.2525	13.0962	0.0291	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,443.3724	2,443.3724	0.1336		2,446.1770
Total	**0.9321**	**1.2525**	**13.0962**	**0.0291**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,443.3724**	**2,443.3724**	**0.1336**		**2,446.1770**

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	28.7124					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	**29.0809**	**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	0.9321	1.2525	13.0962	0.0291	2.4479	0.0205	2.4684	0.6492	0.0188	0.6680		2,443.3724	2,443.3724	0.1336		2,446.1770
Total	**0.9321**	**1.2525**	**13.0962**	**0.0291**	**2.4479**	**0.0205**	**2.4684**	**0.6492**	**0.0188**	**0.6680**		**2,443.3724**	**2,443.3724**	**0.1336**		**2,446.1770**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					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	**29.0447**	**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	0.8360	1.1308	11.8089	0.0291	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,349.5325	2,349.5325	0.1233		2,352.1208
Total	**0.8360**	**1.1308**	**11.8089**	**0.0291**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,349.5325**	**2,349.5325**	**0.1233**		**2,352.1208**

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	28.7124					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	**29.0447**	**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	0.8360	1.1308	11.8089	0.0291	2.4479	0.0197	2.4676	0.6492	0.0182	0.6674		2,349.5325	2,349.5325	0.1233		2,352.1208
Total	**0.8360**	**1.1308**	**11.8089**	**0.0291**	**2.4479**	**0.0197**	**2.4676**	**0.6492**	**0.0182**	**0.6674**		**2,349.5325**	**2,349.5325**	**0.1233**		**2,352.1208**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7519	1.0256	10.6872	0.0290	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,261.7995	2,261.7995	0.1144		2,264.2018
Total	**0.7519**	**1.0256**	**10.6872**	**0.0290**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,261.7995**	**2,261.7995**	**0.1144**		**2,264.2018**

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	28.7124					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**29.0110**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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	0.7519	1.0256	10.6872	0.0290	2.4479	0.0192	2.4671	0.6492	0.0177	0.6669		2,261.7995	2,261.7995	0.1144		2,264.2018
Total	**0.7519**	**1.0256**	**10.6872**	**0.0290**	**2.4479**	**0.0192**	**2.4671**	**0.6492**	**0.0177**	**0.6669**		**2,261.7995**	**2,261.7995**	**0.1144**		**2,264.2018**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0515	0.0702	0.7320	1.9900e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		154.9178	154.9178	7.8400e-003		155.0823
Total	**0.0515**	**0.0702**	**0.7320**	**1.9900e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**154.9178**	**154.9178**	**7.8400e-003**		**155.0823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.8618					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4733**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

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	0.0515	0.0702	0.7320	1.9900e-003	0.1677	1.3100e-003	0.1690	0.0445	1.2100e-003	0.0457		154.9178	154.9178	7.8400e-003		155.0823
Total	**0.0515**	**0.0702**	**0.7320**	**1.9900e-003**	**0.1677**	**1.3100e-003**	**0.1690**	**0.0445**	**1.2100e-003**	**0.0457**		**154.9178**	**154.9178**	**7.8400e-003**		**155.0823**

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	81.9971	191.1977	775.2873	1.8472	128.3246	2.6858	131.0103	34.2875	2.4747	36.7622		152,643.9474	152,643.9474	5.9880		152,769.6946
Unmitigated	81.9971	191.1977	775.2873	1.8472	128.3246	2.6858	131.0103	34.2875	2.4747	36.7622		152,643.9474	152,643.9474	5.9880		152,769.6946

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	45,339,416	45,339,416
Total	17,787.00	27,405.00	27,405.00	45,339,416	45,339,416

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.90	8.60	7.00	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
NaturalGas Unmitigated	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

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					
Regional Shopping Center	3490.41	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0376**	**0.3422**	**0.2875**	**2.0500e-003**		**0.0260**	**0.0260**		**0.0260**	**0.0260**		**410.6366**	**410.6366**	**7.8700e-003**	**7.5300e-003**	**413.1357**

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					
Regional Shopping Center	3.49041	0.0376	0.3422	0.2875	2.0500e-003		0.0260	0.0260		0.0260	0.0260		410.6366	410.6366	7.8700e-003	7.5300e-003	413.1357

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0376**	**0.3422**	**0.2875**	**2.0500e-003**		**0.0260**	**0.0260**		**0.0260**	**0.0260**		**410.6366**	**410.6366**	**7.8700e-003**	**7.5300e-003**	**413.1357**

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	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Unmitigated	60.8877	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

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	6.0521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730

Total	**60.8877**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

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	6.0521					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	54.8282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.4000e-003	7.2000e-004	0.0774	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1636	0.1636	4.5000e-004		0.1730
Total	**60.8877**	**7.2000e-004**	**0.0774**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**		**0.1636**	**0.1636**	**4.5000e-004**		**0.1730**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Irwindale Regional Shopping Center - BAU

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	22.50	Acre	22.50	980,100.00	0
Parking Lot	25.00	Acre	25.00	1,089,000.00	0
Regional Shopping Center	700.00	1000sqft	16.07	700,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total site = 63.5 acres

Construction Phase - Schedule based on project plans and a fall 2018 completion estimate. Assumed that architectural coating is applied during building construction

Demolition - Esitmated tonnage based on size of racetrack and ancillary buildings.

Grading -

Architectural Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Vehicle Trips - 25.41 trip rate from project traffic study, used peak daily rate for weekdays. The weekend ADT is 27,408, used for Sat and Sun. Increased trip lengths by 2% per the Scoping Plan efficiency reductions

Area Coating - The total surface for painting set to 2 times the building square footage, 1/4 as exterior.

Energy Use -

Water And Wastewater - Increased the water usage rate by 10% to account for Title 24 efficiencies.

Solid Waste - Increased the waste rate by 10% to account for Title 24 efficiencies.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	856,385.00	350,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,569,155.00	1,050,000.00
tblAreaCoating	Area_Nonresidential_Interior	2569155	1050000
tblConstructionPhase	NumDays	75.00	565.00
tblConstructionPhase	NumDays	1,110.00	849.00
tblConstructionPhase	NumDays	70.00	42.00
tblConstructionPhase	NumDays	110.00	10.00
tblConstructionPhase	NumDays	75.00	76.00
tblConstructionPhase	NumDays	40.00	15.00
tblConstructionPhase	PhaseEndDate	9/3/2020	7/1/2018
tblConstructionPhase	PhaseEndDate	10/15/2018	10/20/2018
tblConstructionPhase	PhaseStartDate	7/6/2018	5/2/2016
tblConstructionPhase	PhaseStartDate	3/21/2015	3/23/2015
tblConstructionPhase	PhaseStartDate	7/2/2018	7/6/2018
tblConstructionPhase	PhaseStartDate	2/28/2015	3/2/2015
tblProjectCharacteristics	OperationalYear	2014	2018
tblSolidWaste	SolidWasteGenerationRate	735.00	809.00
tblVehicleTrips	CC_TL	8.40	8.60
tblVehicleTrips	CNW_TL	6.90	7.00
tblVehicleTrips	CW_TL	16.60	16.90
tblVehicleTrips	ST_TR	49.97	39.15
tblVehicleTrips	SU_TR	25.24	39.15
tblVehicleTrips	WD_TR	42.94	25.41
tblWater	IndoorWaterUseRate	51,850,765.04	57,035,842.00

tblWater	OutdoorWaterUseRate	31,779,501.15	34,957,451.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.4648	10.3488	16.1654	0.0288	1.8845	0.3908	2.2753	0.5229	0.3642	0.8871	0.0000	2,463.1975	2,463.1975	0.1695	0.0000	2,466.7577
2016	4.1651	10.2591	19.3948	0.0384	2.1397	0.3730	2.5127	0.5755	0.3495	0.9250	0.0000	3,170.1220	3,170.1220	0.1790	0.0000	3,173.8818
2017	5.2720	9.4997	18.5439	0.0397	2.2345	0.3440	2.5785	0.6007	0.3228	0.9234	0.0000	3,175.7096	3,175.7096	0.1754	0.0000	3,179.3934
2018	2.6741	5.0722	9.4709	0.0213	1.1531	0.1895	1.3426	0.3100	0.1772	0.4871	0.0000	1,670.7093	1,670.7093	0.1104	0.0000	1,673.0281
Total	**13.5760**	**35.1798**	**63.5750**	**0.1282**	**7.4118**	**1.2972**	**8.7090**	**2.0090**	**1.2137**	**3.2226**	**0.0000**	**10,479.7384**	**10,479.7384**	**0.6344**	**0.0000**	**10,493.0610**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.4648	10.3488	16.1654	0.0288	1.6253	0.3908	2.0161	0.4438	0.3642	0.8080	0.0000	2,463.1971	2,463.1971	0.1695	0.0000	2,466.7572
2016	4.1651	10.2591	19.3948	0.0384	2.1397	0.3730	2.5127	0.5755	0.3495	0.9250	0.0000	3,170.1216	3,170.1216	0.1790	0.0000	3,173.8814
2017	5.2720	9.4997	18.5439	0.0397	2.2345	0.3440	2.5785	0.6007	0.3228	0.9234	0.0000	3,175.7092	3,175.7092	0.1754	0.0000	3,179.3930

2018	2.6741	5.0722	9.4709	0.0213	1.1531	0.1895	1.3426	0.3100	0.1772	0.4871	0.0000	1,670.7090	1,670.7090	0.1104	0.0000	1,673.0278
Total	**13.5760**	**35.1798**	**63.5750**	**0.1282**	**7.1526**	**1.2972**	**8.4498**	**1.9298**	**1.2137**	**3.1435**	**0.0000**	**10,479.7368**	**10,479.7368**	**0.6344**	**0.0000**	**10,493.0595**

	ROG	NOx	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**	**3.50**	**0.00**	**2.98**	**3.94**	**0.00**	**2.46**	**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	tons/yr										MT/yr					
Area	11.1116	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Energy	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	3,539.2814	3,539.2814	0.1609	0.0343	3,553.2802
Mobile	10.5610	26.5749	106.2134	0.2548	17.1821	0.3647	17.5468	4.5979	0.3361	4.9339	0.0000	19,094.7145	19,094.7145	0.7394	0.0000	19,110.2415
Waste						0.0000	0.0000		0.0000	0.0000	164.2197	0.0000	164.2197	9.7051	0.0000	368.0269
Water						0.0000	0.0000		0.0000	0.0000	18.0948	323.6665	341.7613	1.8734	0.0470	395.6607
Total	**21.6795**	**26.6374**	**106.2756**	**0.2552**	**17.1821**	**0.3695**	**17.5516**	**4.5979**	**0.3408**	**4.9387**	**182.3145**	**22,957.6810**	**23,139.9955**	**12.4788**	**0.0812**	**23,427.2288**

Mitigated Operational

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

Area	11.1116	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Energy	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	3,539.2814	3,539.2814	0.1609	0.0343	3,553.2802
Mobile	10.5610	26.5749	106.2134	0.2548	17.1821	0.3647	17.5468	4.5979	0.3361	4.9339	0.0000	19,094.7145	19,094.7145	0.7394	0.0000	19,110.2415
Waste						0.0000	0.0000		0.0000	0.0000	164.2197	0.0000	164.2197	9.7051	0.0000	368.0269
Water						0.0000	0.0000		0.0000	0.0000	18.0948	323.6665	341.7613	1.8731	0.0469	395.6318
Total	**21.6795**	**26.6374**	**106.2756**	**0.2552**	**17.1821**	**0.3695**	**17.5516**	**4.5979**	**0.3408**	**4.9387**	**182.3145**	**22,957.6810**	**23,139.9955**	**12.4785**	**0.0812**	**23,427.2000**

	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**	**0.09**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	2/27/2015	5	42	
2	Site Preparation	Site Preparation	3/2/2015	3/20/2015	5	15	
3	Grading	Grading	3/23/2015	4/3/2015	5	10	
4	Building Construction	Building Construction	4/4/2015	7/5/2018	5	849	
5	Architectural Coating	Architectural Coating	5/2/2016	7/1/2018	5	565	
6	Paving	Paving	7/6/2018	10/20/2018	5	76	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,050,000; Non-Residential Outdoor: 350,000 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	2,274.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,093.00	454.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	219.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2461	0.0000	0.2461	0.0373	0.0000	0.0373	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0947	1.0156	0.7576	8.4000e-004		0.0515	0.0515		0.0480	0.0480	0.0000	78.6267	78.6267	0.0213	0.0000	79.0743
Total	**0.0947**	**1.0156**	**0.7576**	**8.4000e-004**	**0.2461**	**0.0515**	**0.2976**	**0.0373**	**0.0480**	**0.0853**	**0.0000**	**78.6267**	**78.6267**	**0.0213**	**0.0000**	**79.0743**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0231	0.3759	0.2669	8.4000e-004	0.0195	6.1000e-003	0.0256	5.3400e-003	5.6100e-003	0.0110	0.0000	77.5341	77.5341	6.2000e-004	0.0000	77.5470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.0600e-003	0.0214	4.0000e-005	3.4600e-003	3.0000e-005	3.4900e-003	9.2000e-004	3.0000e-005	9.5000e-004	0.0000	3.3538	3.3538	1.9000e-004	0.0000	3.3578

Total	**0.0245**	**0.3779**	**0.2883**	**8.8000e-004**	**0.0229**	**6.1300e-003**	**0.0291**	**6.2600e-003**	**5.6400e-003**	**0.0119**	**0.0000**	**80.8879**	**80.8879**	**8.1000e-004**	**0.0000**	**80.9048**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0960	0.0000	0.0960	0.0145	0.0000	0.0145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0947	1.0156	0.7576	8.4000e-004		0.0515	0.0515		0.0480	0.0480	0.0000	78.6266	78.6266	0.0213	0.0000	79.0742
Total	**0.0947**	**1.0156**	**0.7576**	**8.4000e-004**	**0.0960**	**0.0515**	**0.1474**	**0.0145**	**0.0480**	**0.0625**	**0.0000**	**78.6266**	**78.6266**	**0.0213**	**0.0000**	**79.0742**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0231	0.3759	0.2669	8.4000e-004	0.0195	6.1000e-003	0.0256	5.3400e-003	5.6100e-003	0.0110	0.0000	77.5341	77.5341	6.2000e-004	0.0000	77.5470
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.0600e-003	0.0214	4.0000e-005	3.4600e-003	3.0000e-005	3.4900e-003	9.2000e-004	3.0000e-005	9.5000e-004	0.0000	3.3538	3.3538	1.9000e-004	0.0000	3.3578
Total	**0.0245**	**0.3779**	**0.2883**	**8.8000e-004**	**0.0229**	**6.1300e-003**	**0.0291**	**6.2600e-003**	**5.6400e-003**	**0.0119**	**0.0000**	**80.8879**	**80.8879**	**8.1000e-004**	**0.0000**	**80.9048**

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0395	0.4267	0.3197	2.9000e-004		0.0232	0.0232		0.0213	0.0213	0.0000	27.9758	27.9758	8.3500e-003	0.0000	28.1512
Total	**0.0395**	**0.4267**	**0.3197**	**2.9000e-004**	**0.1355**	**0.0232**	**0.1587**	**0.0745**	**0.0213**	**0.0958**	**0.0000**	**27.9758**	**27.9758**	**8.3500e-003**	**0.0000**	**28.1512**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1600e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4373	1.4373	8.0000e-005	0.0000	1.4390
Total	**6.0000e-004**	**8.8000e-004**	**9.1600e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.4373**	**1.4373**	**8.0000e-005**	**0.0000**	**1.4390**

Mitigated Construction On-Site

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

Fugitive Dust					0.0528	0.0000	0.0528	0.0291	0.0000	0.0291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0395	0.4267	0.3197	2.9000e-004		0.0232	0.0232		0.0213	0.0213	0.0000	27.9758	27.9758	8.3500e-003	0.0000	28.1512
Total	**0.0395**	**0.4267**	**0.3197**	**2.9000e-004**	**0.0528**	**0.0232**	**0.0760**	**0.0291**	**0.0213**	**0.0504**	**0.0000**	**27.9758**	**27.9758**	**8.3500e-003**	**0.0000**	**28.1512**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	8.8000e-004	9.1600e-003	2.0000e-005	1.4800e-003	1.0000e-005	1.4900e-003	3.9000e-004	1.0000e-005	4.1000e-004	0.0000	1.4373	1.4373	8.0000e-005	0.0000	1.4390
Total	**6.0000e-004**	**8.8000e-004**	**9.1600e-003**	**2.0000e-005**	**1.4800e-003**	**1.0000e-005**	**1.4900e-003**	**3.9000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.4373**	**1.4373**	**8.0000e-005**	**0.0000**	**1.4390**

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0434	0.0000	0.0434	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0339	0.3952	0.2542	3.1000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	29.4211	29.4211	8.7800e-003	0.0000	29.6056
Total	**0.0339**	**0.3952**	**0.2542**	**3.1000e-004**	**0.0434**	**0.0190**	**0.0624**	**0.0180**	**0.0175**	**0.0355**	**0.0000**	**29.4211**	**29.4211**	**8.7800e-003**	**0.0000**	**29.6056**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.5000e-004	6.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0647	1.0647	6.0000e-005	0.0000	1.0660
Total	**4.5000e-004**	**6.5000e-004**	**6.7800e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0647**	**1.0647**	**6.0000e-005**	**0.0000**	**1.0660**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0169	0.0000	0.0169	7.0100e-003	0.0000	7.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0339	0.3952	0.2542	3.1000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	29.4211	29.4211	8.7800e-003	0.0000	29.6055
Total	**0.0339**	**0.3952**	**0.2542**	**3.1000e-004**	**0.0169**	**0.0190**	**0.0359**	**7.0100e-003**	**0.0175**	**0.0245**	**0.0000**	**29.4211**	**29.4211**	**8.7800e-003**	**0.0000**	**29.6055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.5000e-004	6.7800e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0647	1.0647	6.0000e-005	0.0000	1.0660
Total	**4.5000e-004**	**6.5000e-004**	**6.7800e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**1.0647**	**1.0647**	**6.0000e-005**	**0.0000**	**1.0660**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3549	2.9129	1.8182	2.6000e-003		0.2053	0.2053		0.1931	0.1931	0.0000	236.6745	236.6745	0.0594	0.0000	237.9215
Total	**0.3549**	**2.9129**	**1.8182**	**2.6000e-003**		**0.2053**	**0.2053**		**0.1931**	**0.1931**	**0.0000**	**236.6745**	**236.6745**	**0.0594**	**0.0000**	**237.9215**

Unmitigated Construction Off-Site

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

Vendor	0.4439	4.5269	5.5211	9.5800e-003	0.2709	0.0752	0.3461	0.0773	0.0692	0.1465	0.0000	878.3128	878.3128	7.0100e-003	0.0000	878.4599
Worker	0.4724	0.6921	7.1903	0.0143	1.1632	0.0104	1.1736	0.3089	9.5600e-003	0.3185	0.0000	1,128.7968	1,128.7968	0.0637	0.0000	1,130.1354
Total	**0.9163**	**5.2189**	**12.7115**	**0.0239**	**1.4341**	**0.0856**	**1.5197**	**0.3862**	**0.0787**	**0.4649**	**0.0000**	**2,007.1095**	**2,007.1095**	**0.0708**	**0.0000**	**2,008.5953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3549	2.9129	1.8182	2.6000e-003		0.2053	0.2053		0.1931	0.1931	0.0000	236.6742	236.6742	0.0594	0.0000	237.9212
Total	**0.3549**	**2.9129**	**1.8182**	**2.6000e-003**		**0.2053**	**0.2053**		**0.1931**	**0.1931**	**0.0000**	**236.6742**	**236.6742**	**0.0594**	**0.0000**	**237.9212**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4439	4.5269	5.5211	9.5800e-003	0.2709	0.0752	0.3461	0.0773	0.0692	0.1465	0.0000	878.3128	878.3128	7.0100e-003	0.0000	878.4599
Worker	0.4724	0.6921	7.1903	0.0143	1.1632	0.0104	1.1736	0.3089	9.5600e-003	0.3185	0.0000	1,128.7968	1,128.7968	0.0637	0.0000	1,130.1354
Total	**0.9163**	**5.2189**	**12.7115**	**0.0239**	**1.4341**	**0.0856**	**1.5197**	**0.3862**	**0.0787**	**0.4649**	**0.0000**	**2,007.1095**	**2,007.1095**	**0.0708**	**0.0000**	**2,008.5953**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5272	5.3788	6.9048	0.0129	0.3645	0.0839	0.4484	0.1040	0.0772	0.1812	0.0000	1,168.6421	1,168.6421	8.5200e-003	0.0000	1,168.8210
Worker	0.5719	0.8398	8.7364	0.0192	1.5649	0.0133	1.5782	0.4156	0.0123	0.4279	0.0000	1,466.1576	1,466.1576	0.0789	0.0000	1,467.8147
Total	**1.0992**	**6.2186**	**15.6412**	**0.0321**	**1.9294**	**0.0972**	**2.0267**	**0.5196**	**0.0894**	**0.6091**	**0.0000**	**2,634.7997**	**2,634.7997**	**0.0874**	**0.0000**	**2,636.6357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.5272	5.3788	6.9048	0.0129	0.3645	0.0839	0.4484	0.1040	0.0772	0.1812	0.0000	1,168.6421	1,168.6421	8.5200e-003	0.0000	1,168.8210
Worker	0.5719	0.8398	8.7364	0.0192	1.5649	0.0133	1.5782	0.4156	0.0123	0.4279	0.0000	1,466.1576	1,466.1576	0.0789	0.0000	1,467.8147
Total	**1.0992**	**6.2186**	**15.6412**	**0.0321**	**1.9294**	**0.0972**	**2.0267**	**0.5196**	**0.0894**	**0.6091**	**0.0000**	**2,634.7997**	**2,634.7997**	**0.0874**	**0.0000**	**2,636.6357**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319

Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4802	4.8761	6.5183	0.0128	0.3633	0.0746	0.4378	0.1037	0.0686	0.1723	0.0000	1,145.3167	1,145.3167	8.2100e-003	0.0000	1,145.4891
Worker	0.5104	0.7554	7.8526	0.0192	1.5589	0.0128	1.5717	0.4140	0.0118	0.4258	0.0000	1,404.4698	1,404.4698	0.0726	0.0000	1,405.9933
Total	**0.9906**	**5.6315**	**14.3709**	**0.0320**	**1.9222**	**0.0874**	**2.0095**	**0.5177**	**0.0804**	**0.5981**	**0.0000**	**2,549.7865**	**2,549.7865**	**0.0808**	**0.0000**	**2,551.4824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4802	4.8761	6.5183	0.0128	0.3633	0.0746	0.4378	0.1037	0.0686	0.1723	0.0000	1,145.3167	1,145.3167	8.2100e-003	0.0000	1,145.4891
Worker	0.5104	0.7554	7.8526	0.0192	1.5589	0.0128	1.5717	0.4140	0.0118	0.4258	0.0000	1,404.4698	1,404.4698	0.0726	0.0000	1,405.9933
Total	**0.9906**	**5.6315**	**14.3709**	**0.0320**	**1.9222**	**0.0874**	**2.0095**	**0.5177**	**0.0804**	**0.5981**	**0.0000**	**2,549.7865**	**2,549.7865**	**0.0808**	**0.0000**	**2,551.4824**

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1788	1.5585	1.1747	1.8000e-003		0.1001	0.1001		0.0941	0.0941	0.0000	158.6357	158.6357	0.0388	0.0000	159.4509
Total	**0.1788**	**1.5585**	**1.1747**	**1.8000e-003**		**0.1001**	**0.1001**		**0.0941**	**0.0941**	**0.0000**	**158.6357**	**158.6357**	**0.0388**	**0.0000**	**159.4509**

Unmitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2316	2.3066	3.2186	6.5900e-003	0.1872	0.0362	0.2234	0.0534	0.0333	0.0868	0.0000	580.3758	580.3758	4.2100e-003	0.0000	580.4642
Worker	0.2363	0.3532	3.6653	9.8600e-003	0.8034	6.4100e-003	0.8099	0.2134	5.9300e-003	0.2193	0.0000	696.8245	696.8245	0.0347	0.0000	697.5532
Total	**0.4679**	**2.6598**	**6.8839**	**0.0165**	**0.9907**	**0.0426**	**1.0333**	**0.2668**	**0.0393**	**0.3061**	**0.0000**	**1,277.2002**	**1,277.2002**	**0.0389**	**0.0000**	**1,278.0174**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1788	1.5585	1.1747	1.8000e-003		0.1001	0.1001		0.0941	0.0941	0.0000	158.6355	158.6355	0.0388	0.0000	159.4507
Total	**0.1788**	**1.5585**	**1.1747**	**1.8000e-003**		**0.1001**	**0.1001**		**0.0941**	**0.0941**	**0.0000**	**158.6355**	**158.6355**	**0.0388**	**0.0000**	**159.4507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2316	2.3066	3.2186	6.5900e-003	0.1872	0.0362	0.2234	0.0534	0.0333	0.0868	0.0000	580.3758	580.3758	4.2100e-003	0.0000	580.4642

Worker	0.2363	0.3532	3.6653	9.8600e-003	0.8034	6.4100e-003	0.8099	0.2134	5.9300e-003	0.2193	0.0000	696.8245	696.8245	0.0347	0.0000	697.5532
Total	**0.4679**	**2.6598**	**6.8839**	**0.0165**	**0.9907**	**0.0426**	**1.0333**	**0.2668**	**0.0393**	**0.3061**	**0.0000**	**1,277.2002**	**1,277.2002**	**0.0389**	**0.0000**	**1,278.0174**

3.6 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	2.5123					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.2076	0.1648	2.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	22.3410	22.3410	2.6300e-003	0.0000	22.3963
Total	**2.5446**	**0.2076**	**0.1648**	**2.6000e-004**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**22.3410**	**22.3410**	**2.6300e-003**	**0.0000**	**22.3963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0768	0.1128	1.1737	2.5800e-003	0.2102	1.7900e-003	0.2120	0.0558	1.6500e-003	0.0575	0.0000	196.9709	196.9709	0.0106	0.0000	197.1936
Total	**0.0768**	**0.1128**	**1.1737**	**2.5800e-003**	**0.2102**	**1.7900e-003**	**0.2120**	**0.0558**	**1.6500e-003**	**0.0575**	**0.0000**	**196.9709**	**196.9709**	**0.0106**	**0.0000**	**197.1936**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5123					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.2076	0.1648	2.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	22.3409	22.3409	2.6300e-003	0.0000	22.3963
Total	**2.5446**	**0.2076**	**0.1648**	**2.6000e-004**		**0.0172**	**0.0172**		**0.0172**	**0.0172**	**0.0000**	**22.3409**	**22.3409**	**2.6300e-003**	**0.0000**	**22.3963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0768	0.1128	1.1737	2.5800e-003	0.2102	1.7900e-003	0.2120	0.0558	1.6500e-003	0.0575	0.0000	196.9709	196.9709	0.0106	0.0000	197.1936
Total	**0.0768**	**0.1128**	**1.1737**	**2.5800e-003**	**0.2102**	**1.7900e-003**	**0.2120**	**0.0558**	**1.6500e-003**	**0.0575**	**0.0000**	**196.9709**	**196.9709**	**0.0106**	**0.0000**	**197.1936**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Archit. Coating	3.7326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**3.7758**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1023	0.1514	1.5734	3.8400e-003	0.3124	2.5600e-003	0.3149	0.0830	2.3600e-003	0.0853	0.0000	281.4080	281.4080	0.0145	0.0000	281.7132
Total	**0.1023**	**0.1514**	**1.5734**	**3.8400e-003**	**0.3124**	**2.5600e-003**	**0.3149**	**0.0830**	**2.3600e-003**	**0.0853**	**0.0000**	**281.4080**	**281.4080**	**0.0145**	**0.0000**	**281.7132**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	3.7326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659

Total	**3.7758**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1023	0.1514	1.5734	3.8400e-003	0.3124	2.5600e-003	0.3149	0.0830	2.3600e-003	0.0853	0.0000	281.4080	281.4080	0.0145	0.0000	281.7132
Total	**0.1023**	**0.1514**	**1.5734**	**3.8400e-003**	**0.3124**	**2.5600e-003**	**0.3149**	**0.0830**	**2.3600e-003**	**0.0853**	**0.0000**	**281.4080**	**281.4080**	**0.0145**	**0.0000**	**281.7132**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1304	0.1205	1.9000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	16.5962	16.5962	1.5800e-003	0.0000	16.6293
Total	**1.8857**	**0.1304**	**0.1205**	**1.9000e-004**		**9.7900e-003**	**9.7900e-003**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**16.5962**	**16.5962**	**1.5800e-003**	**0.0000**	**16.6293**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0459	0.0687	0.7125	1.9200e-003	0.1562	1.2500e-003	0.1574	0.0415	1.1500e-003	0.0426	0.0000	135.4522	135.4522	6.7500e-003	0.0000	135.5938
Total	**0.0459**	**0.0687**	**0.7125**	**1.9200e-003**	**0.1562**	**1.2500e-003**	**0.1574**	**0.0415**	**1.1500e-003**	**0.0426**	**0.0000**	**135.4522**	**135.4522**	**6.7500e-003**	**0.0000**	**135.5938**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8663					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.1304	0.1205	1.9000e-004		9.7900e-003	9.7900e-003		9.7900e-003	9.7900e-003	0.0000	16.5962	16.5962	1.5800e-003	0.0000	16.6293
Total	**1.8857**	**0.1304**	**0.1205**	**1.9000e-004**		**9.7900e-003**	**9.7900e-003**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**16.5962**	**16.5962**	**1.5800e-003**	**0.0000**	**16.6293**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0459	0.0687	0.7125	1.9200e-003	0.1562	1.2500e-003	0.1574	0.0415	1.1500e-003	0.0426	0.0000	135.4522	135.4522	6.7500e-003	0.0000	135.5938
Total	**0.0459**	**0.0687**	**0.7125**	**1.9200e-003**	**0.1562**	**1.2500e-003**	**0.1574**	**0.0415**	**1.1500e-003**	**0.0426**	**0.0000**	**135.4522**	**135.4522**	**6.7500e-003**	**0.0000**	**135.5938**

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0612	0.6522	0.5508	8.5000e-004		0.0357	0.0357		0.0328	0.0328	0.0000	77.4012	77.4012	0.0241	0.0000	77.9072
Paving	0.0328					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0940**	**0.6522**	**0.5508**	**8.5000e-004**		**0.0357**	**0.0357**		**0.0328**	**0.0328**	**0.0000**	**77.4012**	**77.4012**	**0.0241**	**0.0000**	**77.9072**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	2.7500e-003	0.0285	8.0000e-005	6.2500e-003	5.0000e-005	6.3000e-003	1.6600e-003	5.0000e-005	1.7100e-003	0.0000	5.4238	5.4238	2.7000e-004	0.0000	5.4295

Total	**1.8400e-003**	**2.7500e-003**	**0.0285**	**8.0000e-005**	**6.2500e-003**	**5.0000e-005**	**6.3000e-003**	**1.6600e-003**	**5.0000e-005**	**1.7100e-003**	**0.0000**	**5.4238**	**5.4238**	**2.7000e-004**	**0.0000**	**5.4295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0612	0.6522	0.5508	8.5000e-004		0.0357	0.0357		0.0328	0.0328	0.0000	77.4011	77.4011	0.0241	0.0000	77.9071
Paving	0.0328					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0940**	**0.6522**	**0.5508**	**8.5000e-004**		**0.0357**	**0.0357**		**0.0328**	**0.0328**	**0.0000**	**77.4011**	**77.4011**	**0.0241**	**0.0000**	**77.9071**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	2.7500e-003	0.0285	8.0000e-005	6.2500e-003	5.0000e-005	6.3000e-003	1.6600e-003	5.0000e-005	1.7100e-003	0.0000	5.4238	5.4238	2.7000e-004	0.0000	5.4295
Total	**1.8400e-003**	**2.7500e-003**	**0.0285**	**8.0000e-005**	**6.2500e-003**	**5.0000e-005**	**6.3000e-003**	**1.6600e-003**	**5.0000e-005**	**1.7100e-003**	**0.0000**	**5.4238**	**5.4238**	**2.7000e-004**	**0.0000**	**5.4295**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	10.5610	26.5749	106.2134	0.2548	17.1821	0.3647	17.5468	4.5979	0.3361	4.9339	0.0000	19,094.7145	19,094.7145	0.7394	0.0000	19,110.2415
Unmitigated	10.5610	26.5749	106.2134	0.2548	17.1821	0.3647	17.5468	4.5979	0.3361	4.9339	0.0000	19,094.7145	19,094.7145	0.7394	0.0000	19,110.2415

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	17,787.00	27,405.00	27405.00	45,339,416	45,339,416
Total	17,787.00	27,405.00	27,405.00	45,339,416	45,339,416

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.90	8.60	7.00	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.512137	0.059943	0.180601	0.139123	0.042256	0.006647	0.016115	0.031670	0.001940	0.002502	0.004362	0.000588	0.002117

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,471.2960	3,471.2960	0.1596	0.0330	3,484.8809
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,471.2960	3,471.2960	0.1596	0.0330	3,484.8809
NaturalGas Mitigated	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	67.9855	67.9855	1.3000e-003	1.2500e-003	68.3992
NaturalGas Unmitigated	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	67.9855	67.9855	1.3000e-003	1.2500e-003	68.3992

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.274e+006	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	67.9855	67.9855	1.3000e-003	1.2500e-003	68.3992
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.8700e-003**	**0.0625**	**0.0525**	**3.7000e-004**		**4.7500e-003**	**4.7500e-003**		**4.7500e-003**	**4.7500e-003**	**0.0000**	**67.9855**	**67.9855**	**1.3000e-003**	**1.2500e-003**	**68.3992**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	1.274e+006	6.8700e-003	0.0625	0.0525	3.7000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003	0.0000	67.9855	67.9855	1.3000e-003	1.2500e-003	68.3992
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.8700e-003**	**0.0625**	**0.0525**	**3.7000e-004**		**4.7500e-003**	**4.7500e-003**		**4.7500e-003**	**4.7500e-003**	**0.0000**	**67.9855**	**67.9855**	**1.3000e-003**	**1.2500e-003**	**68.3992**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	958320	274.2395	0.0126	2.6100e-003	275.3127
Regional Shopping Center	1.1172e+007	3,197.0565	0.1470	0.0304	3,209.5682
Total		**3,471.2960**	**0.1596**	**0.0330**	**3,484.8809**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	958320	274.2395	0.0126	2.6100e-003	275.3127
Regional Shopping Center	1.1172e+007	3,197.0565	0.1470	0.0304	3,209.5682
Total		**3,471.2960**	**0.1596**	**0.0330**	**3,484.8809**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	11.1116	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Unmitigated	11.1116	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196

6.2 Area by SubCategory

Unmitigated

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

Architectural Coating	1.1045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.0061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Total	**11.1116**	**9.0000e-005**	**9.6700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0196**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1045					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.0061					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.2000e-004	9.0000e-005	9.6700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0186	0.0186	5.0000e-005	0.0000	0.0196
Total	**11.1116**	**9.0000e-005**	**9.6700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0196**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	341.7613	1.8731	0.0469	395.6318
Unmitigated	341.7613	1.8734	0.0470	395.6607

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	57.0358 / 34.9575	341.7613	1.8734	0.0470	395.6607
Total		**341.7613**	**1.8734**	**0.0470**	**395.6607**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	57.0358 / 34.9575	341.7613	1.8731	0.0469	395.6318
Total		**341.7613**	**1.8731**	**0.0469**	**395.6318**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	164.2197	9.7051	0.0000	368.0269
Unmitigated	164.2197	9.7051	0.0000	368.0269

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	809	164.2197	9.7051	0.0000	368.0269
Total		**164.2197**	**9.7051**	**0.0000**	**368.0269**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	809	164.2197	9.7051	0.0000	368.0269
Total		**164.2197**	**9.7051**	**0.0000**	**368.0269**

9.0 Operational Offroad

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

10.0 Vegetation