Newport Center Villas

AIR QUALITY IMPACT ANALYSIS

CITY OF NEWPORT BEACH

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AUGUST 13, 2015 (REVISED)
JUNE 26, 2015

TABLE OF CONTENTS

APPENDICES

APPENDIX 3.1: CALEEMOD EMISSIONS MODEL OUTPUTS
APPENDIX 3.2: STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

LIST OF EXHIBITS

LIST OF TABLES

LIST OF ABBREVIATED TERMS

(1)	Reference
µg/m3	Microgram per Cubic Meter
AADT	Annual Average Daily Trips
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measures
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
LST	Localized Significance Threshold
NAAQS	National Ambient Air Quality Standards
NO2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
Pb	Lead
PM10	Particulate Matter 10 microns in diameter or less
PM2.5	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
Project	Newport Center Villas
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPs	State Implementation Plans
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis

TOG	Total Organic Gases
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

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EXECUTIVE SUMMARY

Short-Term Construction

For regional emissions, the Project would not exceed the numerical thresholds of significance established by the South Coast Air Quality Management District (SCAQMD). Thus a less than significant impact will occur.

Additionally, emissions during construction activity will not exceed the SCAQMD's localized significance threshold. Therefore, a less than significant impact would occur.

Project construction-source emissions would not conflict with the applicable Air Quality Management Plan (AQMP).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Long-Term Operational

For regional emissions, the Project would not exceed the numerical thresholds of significance established by the SCAQMD. Thus a less than significant impact would occur for Project-related operational-source emissions.

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during operational activity is expected.

Project operational-source emissions would not conflict with the AQMP.

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous residential refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (1) . Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

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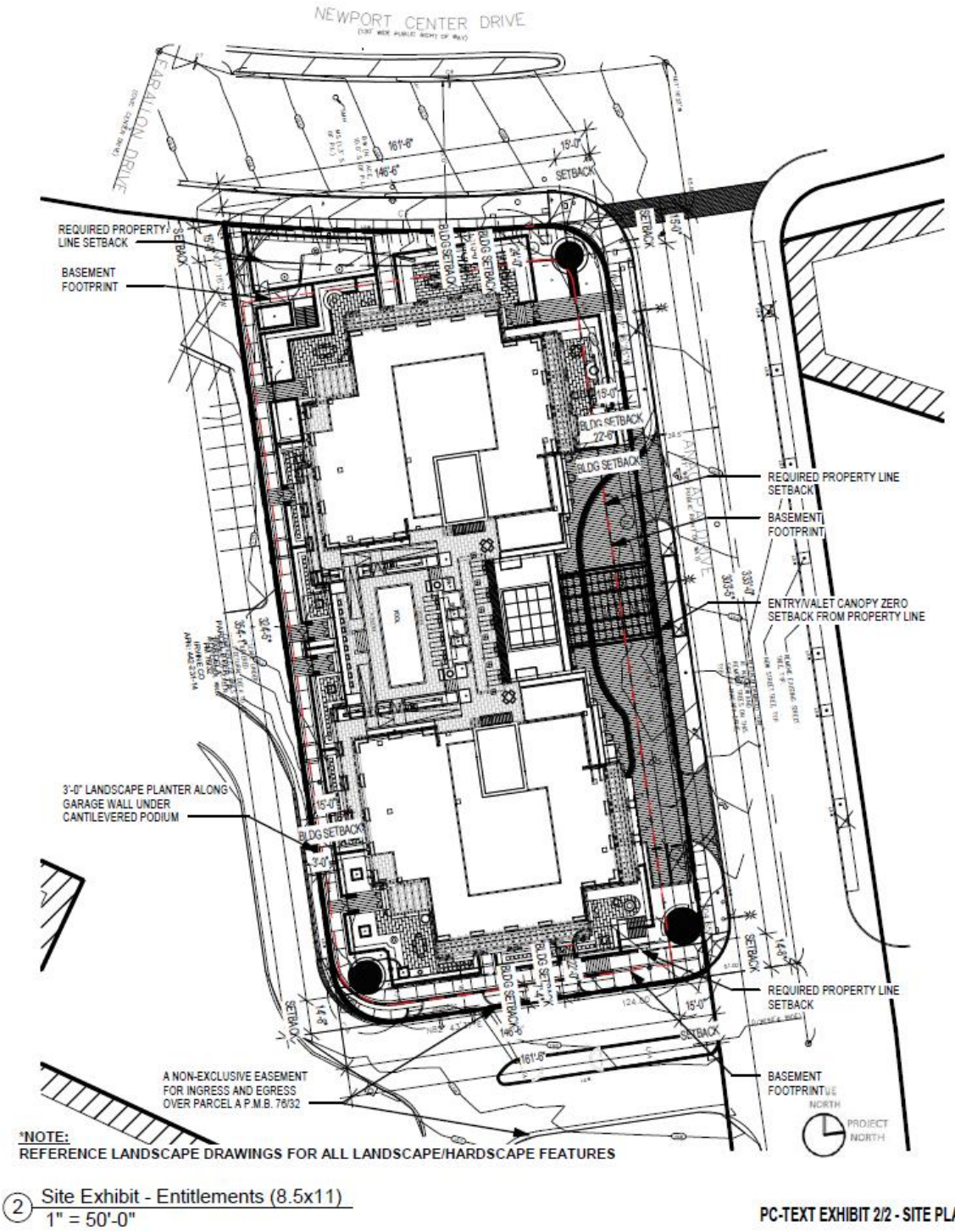
1 INTRODUCTION

This report provides air quality for the proposed Newport Center Villas Project (referred to as "Project"), which is located at 150 Newport Ctr. Dr. in the city of Newport Beach, CA. The purpose of this Air Quality Impact Analysis (AQIA) is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project.

1.1 PROJECT OVERVIEW

The proposed Newport Center Villas project is located on the southwest corner of the Newport Center Drive/Anacapa Drive intersection and the 1.26-acre site is currently occupied by the Newport Beach Car Wash. The project applicant proposed to remove the existing car wash on the site and construct a 7-story, 49-unit condominium building with three levels of subterranean parking. The project applicant is proposing site access from Anacapa Drive and access drive on the southern edge of the project site that serves the existing car wash as well as existing office uses to the west of the project site. The main driveway entry on Anacapa Drives will have a porte-cochere and is planned to be approximately 26 feet wide. The site shall have optional valet service for residents and mandatory valet service for guests at the entrance on Anacapa Drive. The main resident entrance and exit will be on the south edge of the project site. The project will have three levels of parking below grade with level B-1 partially at grade on the southern edge of the project site allowing for tenant access and delivery vehicles. The project proposes 126 parking spaces which will consist of 100 resident spaces and 26 visitor spaces.

EXHIBIT 1-A: PRELIMINARY SITE PLAN



Source: TBP-15-001 Newport Center Villa Traffic and Parking Evaluation- June 2015

2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (2). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles.

The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14 1/2 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NOX and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The Basin is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well health effects of each pollutant regulated under these standards are shown in Table 2-1 (3).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O3, CO, SO2, NO2, PM10, and PM2.5 are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O3, PM10, PM2.5, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (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 (PM10)[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 (PM2.5)[8]	24 Hour	—	—	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)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[9]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion 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			

See footnotes at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

For more information please call ARB-PIO at (916) 322-2990 — California Air Resources Board (6/4/13)

2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2013, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM10, and PM2.5 at most monitoring locations (4). No areas of the SCAB exceeded federal or state standards for NO2, SO2, CO, sulfates or lead. See Table 2-2 for attainment designations for the SCAB (5). Appendix 3.2 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O_3), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2) is the South Coast Air Quality Management District North Orange County monitoring station (SRA 18) (6). Inhalable Particulates (PM_{10}) and Ultra-Fine Particulates ($PM_{2.5}$) are not measured at the North Orange County monitoring station. The nearest station to the Project site that measures particulates is the Saddleback Valley Monitoring Station which is located within SRA 19.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is was considered to be representative of the local air quality at the Project site (7). Additionally, data for SO2 has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO2 concentrations.

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and effects are identified below:

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- Sulfur Dioxide (SO2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO2 oxidizes in the atmosphere, it forms sulfates (SO4). Collectively, these pollutants are referred to as sulfur oxides (SOX).

TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour standard	Nonattainment	No Standard
Ozone - 8 hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Attainment
Lead[1]	Attainment	Unclassified/Attainment

Source: State/Federal designations were taken from http://www.arb.ca.gov/desig/adm/adm.htm
Note: See Appendix 3.2 for a detailed map of State/National Area Designations within the South Coast Air Basin

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2012-2014

POLLUTANT	STANDARD	YEAR		
		2012	2103	2014
Ozone (O3)				
Maximum 1-Hour Concentration (ppm)		0.09	0.095	0.096
Maximum 8-Hour Concentration (ppm)		0.076	0.083	0.079
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	2	1	-
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	1	2	-
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	0	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	1	1	4
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		--	--	2.7
Maximum 8-Hour Concentration (ppm)		1.7	1.3	1.9
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	0
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO2)				
Maximum 1-Hour Concentration (ppb)		74	75.7	61
Annual Arithmetic Mean Concentration (ppb)		10	11.6	--
Number of Days Exceeding State 1-Hour Standard	> 180 ppb	0	0	0
Particulate Matter ≤ 10 Microns (PM10)				
Maximum 24-Hour Concentration (µg/m3)		37	51	41
Number of Samples		60	61	60
Number of Samples Exceeding State Standard	> 50 µg/m3	0	1	0
Number of Samples Exceeding Federal Standard	> 150 µg/m3	0	0	0
Particulate Matter ≤ 2.5 Microns (PM2.5)				
Maximum 24-Hour Concentration (µg/m3)		27.6	28	25.5
Annual Arithmetic Mean (µg/m3)		7.91	8.08	8
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m3	0	0	0

-- = data not available from either SCAQMD or EPA

2012 and 2013 data from SCAQMD data source, 2014 data available from EPA data source.

- Nitrogen Oxides (Oxides of Nitrogen, or NOx): Nitrogen oxides (NOx) consist of nitric oxide (NO), nitrogen dioxide (NO2) and nitrous oxide (N2O) and are formed when nitrogen (N2) combines with oxygen (O2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO2 is the most abundant in the atmosphere. As ambient concentrations of NO2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO2 than those indicated by regional monitors.
- Ozone (O3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOX), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM10 (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM10 also causes visibility reduction and is a criteria air pollutant.
- PM2.5 (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO2 release from power plants and industrial facilities and nitrates that are formed from NOX release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM2.5 is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.
- Reactive Organic Gases (ROG): Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O3, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to

stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an

association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM2.5 concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM10 and PM2.5.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO2.

Animal studies suggest that despite SO2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO2 levels. In these studies, efforts to separate the effects of SO2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.7 REGULATORY BACKGROUND

2.7.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O3, CO, NOx, SO2, PM10, PM2.5, and lead (3). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (8). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O3, NO2,

SO2, PM10, CO, PM2.5, and lead. The NAAQS were amended in July 1997 to include an additional standard for O3 and to adopt a NAAQS for PM2.5. Table 2-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NOx). NOx is a collective term that includes all forms of nitrogen oxides (NO, NO2, NO3) which are emitted as byproducts of the combustion process.

2.7.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (9) (3).

Local air quality management districts, such as the SCAQMD, regulate air emissions from commercial and light industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NOx, CO and PM10. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (10). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.9.

2.8 EXISTING PROJECT SITE AIR QUALITY CONDITIONS

Existing air quality conditions at the Project site would generally reflect ambient monitored conditions as presented previously at Table 2-3.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (11):

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

The SCAQMD has also developed regional and localized significance thresholds for other regulated pollutants, as summarized at Table 3-1 (12). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2011) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
Regional Thresholds		
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
Sox	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Localized Thresholds		
NOx	160.33 lbs/day	n/a
PM10	10.67 lbs/day	n/a
PM2.5	6.00 lbs/day	n/a
CO	1,073.67 lbs/day	n/a

3.3 PROJECT-RELATED SOURCES OF POTENTIAL IMPACT

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2013.2.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO_x, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (17). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1.

In addition to the stated condo high rise and enclosed parking land use, it is assumed that the three-tier parking would include an elevator. Thus, this assessment presents a conservative construction and operational analysis of emissions.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NOx, SOx, PM10, and PM2.5. Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Painting (Architectural Coatings)
- Construction Workers Commuting

Construction is expected to commence in June 2016 and will last through January 2018. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as the analysis year increases. The duration of construction activity was based on a 2018 opening year and modified to two years per applicant's request. Associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity.

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

TABLE 3-2: CONSTRUCTION DURATION

Phase	Duration (working days)
Demolition	40
Site Preparation	4
Grading	30
Building Construction	400
Paving	20
Architectural Coatings	40

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Number	Hours Per Day
Demolition	Concrete/Industrial Saws	1	8
	Rubber Tired Dozers	1	8
	Tractors/Loaders/Backhoes	3	8
Site Preparation	Graders	1	8
	Rubber Tired Dozers	1	7
	Tractors/Loaders/Backhoes	1	8
Grading	Graders	1	6
	Rubber Tired Dozers	1	6
	Tractors/Loaders/Backhoes	1	7
Building Construction	Cranes	1	6
	Forklifts	2	6
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	1	6
	Welders	3	8
Paving	Cement and Mortar mixers	1	6
	Pavers	1	6
	Paving Equipment	1	8
	Rollers	1	7
	Tractors/Loaders/Backhoes	1	8
Architectural Coatings	Air Compressors	1	6

3.4.1 CONSTRUCTION EMISSIONS SUMMARY

The estimated maximum daily construction emissions are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed any criteria pollutant thresholds established by the SCAQMD. Therefore, a less than significant impact would occur and no mitigation is required.

TABLE 3-4: EMISSIONS SUMMARY OF PROPOSED OVERALL CONSTRUCTION

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2016	5.95	80.32	57.11	0.17	10.68	5.44
2017	39.15	20.36	18.37	0.03	1.95	1.39
2018	39.11	2.05	2.36	4.4e-6	0.27	0.18
Maximum Daily Emissions	**39.15**	**80.32**	**57.11**	**0.17**	**10.68**	**5.44**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of ROG, NOX, CO, SOX, PM10, and PM2.5. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within the CalEEMod model.

Hearths/Fireplaces

The emissions associated with use of hearths/fireplaces were calculated based on assumptions provided in the CalEEMod model.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the

landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

3.5.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

3.5.3 MOBILE SOURCE EMISSIONS

Vehicles

Project operational (vehicular) impacts are dependent on the overall daily vehicle trip generation. The existing land use vehicle trip calculations was derived from Existing land use parameters and Table 3 of "Newport Center Villas Traffic and Parking Evaluation." The Project related operational air quality impacts were calculated based on vehicle trip rates from the Institute of Transportation Engineers (ITE) Trip Generation Handbook (9^{th} Edition, 2012).

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model.

3.5.4 OPERATIONAL EMISSIONS SUMMARY

Operational-source emissions for existing and proposed land uses are summarized on Table 3-5 and Table 3-6, respectively. Project operational-source emissions would not exceed applicable SCAQMD regional thresholds of significance. Therefore, a less than significant impact would occur.

TABLE 3-5: SUMMARY OF EXISTING OPERATIONAL EMISSIONS

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	0.22	1.00e-5	8.8e-4	0	0	0
Energy Source	5.43e-3	0.05	0.04	3.00e-4	3.75e-3	3.75e-3
Mobile	1.90	2.79	14.13	0.03	2.36	0.65
Maximum Daily Emissions	**2.13**	**2.84**	**14.17**	**0.03**	**2.36**	**0.66**

Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	0.22	1.00e-5	8.8e-4	0	0	0
Energy Source	5.43e-3	0.05	0.04	3.00e-4	3.75e-3	3.75e-3
Mobile	2.04	2.92	14.95	0.03	2.36	0.65
Maximum Daily Emissions	**2.27**	**2.97**	**14.99**	**0.03**	**2.36**	**0.66**

TABLE 3-6: SUMMARY OF PROPOSED PROJECT OPERATIONAL EMISSIONS

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	15.36	0.37	28.7	3.94e-2	3.77	3.76
Energy Source	0.02	0.20	0.08	1.25e-3	0.02	0.02
Mobile	0.61	1.49	7.14	0.02	1.55	0.43
Maximum Daily Emissions	**16**	**2.06**	**35.94**	**0.06**	**5.33**	**4.21**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	15.36	0.37	28.71	0.04	3.77	3.76
Energy Source	0.02	0.20	0.08	1.25e-3	0.02	0.02
Mobile	0.64	1.57	7.05	0.02	1.55	0.43
Maximum Daily Emissions	**16.03**	**2.14**	**35.84**	**0.06**	**5.33**	**4.21**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.6 LOCALIZED SIGNIFIANCE - CONSTRUCTION ACTIVITY

BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (19). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO2, 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, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM10 and PM2.5; both of which are non-attainment pollutants.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (13).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate Source Receptor Area (SRA) for the LST is the North Orange County monitoring station (SRA 18). LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter ≤ 10 microns (PM10), and particulate matter ≤ 2.5 microns (PM2.5). The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- The CalEEMod model is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (21) is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.

- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact (the SCAQMD recommends that Projects exceeding the screening look-up tables undergo dispersion modeling to determine actual impacts). The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than five acres per day, then the SCAQMD recommends dispersion modeling to be conducted to determine the actual pollutant concentrations for applicable LSTs in the air. In other words, the maximum daily on-site emissions as calculated in CalEEMod are modeled via air dispersion modeling to calculate the actual concentration in the air (e.g., parts per million or micrograms per cubic meter) in order to determine if any applicable thresholds are exceeded.

EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs (14)." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

Based on information provided by the applicant, the project site is approximately 1.26 acres. Therefore, the Project is estimated to have a construction fleet mix similar to the SCAQMD construction equipment guidance for a 1.0 acre site. To ensure consistency with LST modeling of construction-source emissions, the SCAQMD construction equipment guidance for a 1.0 acre site is utilized in this analysis and the proposed Project will result in a maximum of 1.0 acres disturbed during peak construction activity on any given day. Site specific construction fleet may vary due to specific project needs at the time of construction.

Receptors

The nearest sensitive receptor land use is the Newport Center Women's Health Hospital, located approximately 100 meters South of the Project.

Impacts

Emissions during construction activity will not exceed any of the SCAQMD's localized significance thresholds. Tables 3-6 and 3-7 identify the localized impacts at the nearest receptor location in the vicinity of the Project during Site Preparation and Grading activities. A less than significant impact would occur.

TABLE 3-6: LOCALIZED SIGNIFICANCE SUMMARY CONSTRUCTION SITE PREPARATION

On-Site Site Preparation Emissions	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**25.77**	**16.51**	**7.19**	**4.24**
SCAQMD Localized Threshold	108	1,090	27	9
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

TABLE 3-7: LOCALIZED SIGNIFICANCE SUMMARY CONSTRUCTION GRADING

On-Site Grading Emissions	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**21.04**	**13.67**	**5.96**	**3.57**
SCAQMD Localized Threshold	108	1,090	27	9
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

3.7 LOCALIZED SIGNIFICANCE – LONG-TERM OPERATIONAL ACTIVITY

The proposed project involves the construction and operation of 49 condominium high rise dwelling units. According to SCAQMD LST methodology, LSTs would apply to the operational phase of a proposed project, if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The proposed project does not include such uses, and thus, due to the lack of stationary source emissions, no long-term localized significance threshold analysis is needed.

3.8 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

It has long been recognized that adverse localized CO concentrations ("hot spots") are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-3.

A CO "hotspot" would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO (15). As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon

Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection (16). To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This hot spot analysis did not predict any violation of CO standards. It can therefore be reasonably concluded that projects (such as the proposed Newport Center Villas) that are not subject to the extremes in vehicle volumes and vehicle congestion that was evidenced in the 2003 Los Angeles hot spot analysis would similarly not create or result in CO hot spots. Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (17). The proposed Project considered herein would not produce the volume of traffic required to generate a CO hotspot either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO hotspots are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

3.9 AIR QUALITY MANAGEMENT PLANNING

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012 (18) (10). The 2012 AQMP incorporates 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.

Similar to the 2007 AQMP, the 2012 AQMP was based on assumptions provided by both CARB and SCAG in the latest available EMFAC model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2012 AQMP are based on several assumptions. For example, the 2012 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2012 RTP. The 2012 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The Project's consistency with the 2012 AQMP is discussed as follows:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (19). These indicators are discussed below:

- 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.

Construction Impacts

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs were exceeded. As evaluated as part of the Project LST analysis

(previously presented), the Project's localized construction-source emissions would not exceed applicable LSTs.

Operational Impacts

The Project regional analysis demonstrates that Project operational-source emissions would not exceed applicable thresholds, and would therefore not result in or cause violations of the CAAQS and NAAQS.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

Overview

The 2012 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Newport Beach General Plan is considered to be consistent with the AQMP.

Construction Impacts

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

Operational Impacts

It should be noted that the proposed residential development would not exceed regional thresholds for operational emissions, and would therefore be considered to have a less than significant impact. As such, development proposed by the Project is consistent with the growth projections in the General Plan and is therefore considered to be consistent with the AQMP.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site does not materially affect the uses allowed or increase the development intensities as reflected in the adopted General Plan. The Project is therefore considered to be consistent with the AQMP.

3.10 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore sensitive receptors would not be subject to a significant air quality impact during Project construction.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during operational activity. The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8. Thus a less than significant impact to sensitive receptors during operational activity is expected.

3.11 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant.

3.12 CUMULATIVE IMPACTS

The Project area is designated as an extreme non-attainment area for ozone and a non-attainment area for PM_{10} and $PM_{2.5}$.

CRITERION 1; REGIONAL ANALYSIS

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions will not result in exceedances of regional thresholds. Therefore, project construction-source emission would be considered less than significant

Operational Impacts

Project operational-source emissions will not exceed applicable SCAQMD regional thresholds. Per SCAQMD significance guidance, these impacts at the Project level are also considered cumulatively less than significant impact persisting over the life of the Project.

CRITERION 2; LIST APPROACH

A list approach is used, in accordance with Section 15130(b) of the CEQA Guidelines, which states the following:

> *The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.*

The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects. Nevertheless, the potential cumulative impacts from the Project and other projects are discussed below. A cumulative project list was developed for this analysis and is shown in Table 3-9.

Related projects could contribute to an existing or projected air quality exceedance because the Basin is currently nonattainment for ozone, PM10, and PM2.5. With regard to determining the significance of the contribution from the Project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts should be assessed using the same significance criteria as for project-specific impacts. Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a commutatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality

impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional threshold for construction and operational-source emissions. As such, the Project will not result in a cumulatively significant impact.

TABLE 3-9: CUMULATIVE DEVELOPMENT LIST

Project	Proposed Land Uses	Location
Autonation (PA2015-095)	Site Development Review, Conditional Use Permit, and Traffic Study for the construction and operation of an automobile sales and service facility including a showroom, outdoor vehicle display areas, offices, service facility, and vehicle inventory storage and employee parking within a parking structure. Variance for portions of the building to exceed the maximum building height of 35 feet and a Tentative Parcel Map to consolidate 11 existing lots creating one lot.	600 West Coast Highway
ENC Preschool (PA2015-079)	Environmental Nature Center Preschool	745 Dover Drive
Newport Place Residential (PA2014-150)	A mixed-use residential project consisting of up to 384 units and 4,315 square feet of retail use on a 5.7-acre property	1701 Corinthian Way, 1660 Dove St., 4251, 4253, and 4255 Martingale Way, 4200, 4220 & 4250 Scott Drive. Generally bounded by Corinthian Wy., Martingale Dr., Dove St. and Scott Dr.
Ebb Tide (PA2014-110)	The project includes a Tentative Tract Map application to subdivide a 4.7 acre site for 83 residential lots and a Site Development Review application for the construction of 83 single-unit residences, private streets, common open space, and landscaping. The Planned Community Development Plan is proposed to establish guidelines for development of the project site consistent with the General Plan. The Code Amendment is proposed to amend the Zoning Map to change the Zoning District from Multiple-Unit Residential (RM) to Planned Community (PC).	1560 Placentia Drive

Project	Proposed Land Uses	Location
ExplorOcean (PA2014-069)	Demolition of an existing one-story, 26,219 square foot commercial building and a 55-space subterranean parking garage; and the construction of a 70,295 square-foot, 4-story ocean literacy facility located on the 600 East Bay parcel; removal of a 63-metered space surface parking lot (aka: Palm Street Parking Lot) located on the 209 Washington Street, 600 and 608 Balboa Avenue, and 200 Palm parcels and the construction of a 388-space, 141,000 square foot, 5-level off-site parking structure; and a 6,500 square footage floating classroom to be located on the waterside of the project.	600 East Bay, 209 Washington Street, 600 and 608 Balboa Avenue, and 200 Palm
Former City Hall Complex Redevelopment/Lido House Hotel (PA2013-217)	General Plan Amendment, Coastal Land Use Plan Amendment, and Zoning Amendment to change site from Public Facilities to Mixed Use and increase height limit from the 26/35 height limitation area to 55 feet with 65 feet for architectural projections. Fire Station #2 to remain at current location. Construction of a 130-room luxury hotel.	3300 Newport Boulevard and 475 32nd Street
Back Bay Landing (PA2011-216)	Request for legislative approvals to accommodate the future redevelopment of a portion of the property with a mixed-use waterfront project. The Planned Community Development Plan would allow for the development of a new enclosed dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units.	300 E. Coast Highway Generally located at the northwesterly corner of east Coast Highway and Bayside Drive

Project	Proposed Land Uses	Location
Balboa Marina Expansion (PA2012-103) (PA2015-113)	City of Newport Beach Public Access and Transient Docks and Expansion of Balboa Marina • 24 boat slips • 14,252 SF restaurant • 664 SF marina restroom	201 E. Coast Highway
Newport Harbor Yacht Club (PA2012-091)	Demolition of the approximately 20,500 square foot yacht club facility and construction of a new 23,163 square foot facility. The yacht club use will remain on the subject property.	720 West Bay Avenue, 800 West Bay Avenue, 711-721 West Bay Avenue, and 710-720 Balboa Boulevard
Banning Ranch (PA2008-114)	Development of 1,375 residential dwelling units, a 75-room resort inn and ancillary resort uses, 75,000 square feet of commercial uses, approximately 51.4 gross acres of parklands, and approximately 252.3 gross acres of permanent open space.	Generally located north of West Coast Highway, south of 19th Street, and east of the Santa Ana River
Birch Newport Executive Center (PA2014-121)	The project includes the resubdivision of four lots into three lots for commercial development and for condominium purposes, and the construction of two, 2-story medical office buildings totaling 64,000 square feet in gross floor area and a 324-space surface parking lot.	20352 - 20412 Birch Street
Westcliff Medical (PA2013-154)	Construction of two buildings and a three-level parking structure, an addition to an existing building, and the demolition of 25,339 square feet of building area. The project would result in four buildings totaling 73,722 square feet. The total amount of off-street parking would be 382 spaces.	2011, 2043, 2121, and 2131 Westcliff Drive General bounded by Westcliff Drive, Irvine Avenue, and Sherington Place.

Project	Proposed Land Uses	Location
Lido Villas (DART) (PA2012-146)	Request for the demolition of an existing church and office building and legislative approvals for the development of 23 attached three-story townhome condominiums.	3303 and 3355 Via Lido Generally bounded by Via Lido, Via Oporto, and Via Malaga.
Uptown Newport Mixed Use Development (PA2011-134)	Development of 1,244 residential units and 11,500 sf. of commercial retail	4311 & 4321 Jamboree Rd
MacArthur at Dolphin-Striker Way (PA2010-135)	Demolition of a 7,996-sf restaurant and development of 12,351 sf commercial retail.	4221 Dolphin-Striker Way
10 Big Canyon (PA2010-092)	Mitigated Negative Declaration for rough grading for development of a single-family residence.	10 Big Canyon
Plaza Corona del Mar (PA2010-061)	Development of 1,750 sf new office space and six (6) detached townhomes.	3900-3928 East Coast Highway
Newport Beach Country Club Inc (PA2008-152)	Demolition of existing golf course and clubhouse to construct of a new 51,213 sf golf clubhouse and ancillary facilities including a cart barn and bag storage.	1600 -East Coast Highway; northwest of Pacific Coast Highway and Newport Center Drive
Old Newport GPA Project (PA2008-047)	Demolition of 3 existing buildings to construct a new 25,000-sf medical office building.	328, 332, and 340 Old Newport Blvd
Marina Park Project (PA2008-040)	Development includes a public park and beach with recreational facilities; restrooms; a new Girl Scout House; a public short-term visiting vessel marina and sailing center; and a new community center with classrooms, and ancillary office space.	1600 Balboa Blvd; west of 15th St and east of 19th St

Project	Proposed Land Uses	Location
Hoag Memorial Hospital Presbyterian Master Plan Update Project (PA2007-073)	Reallocation of up to 225,000 sf of previously approved (but not constructed) square footage from the Lower Campus to the Upper Campus.	1 Hoag Dr; northwest of West Coast Hwy and Newport Blvd
Koll Center Office Building (PA2007-046)	A request construct a 21,311 square foot, two-story office building over a subterranean parking garage on a 1.49-acre site	4450 MacArthur Boulevard
AERIE Project (PA2005-196)	Residential development including the following: (a) the demolition of the existing residential structures on the 1.4-acre site; (b) the development of 8 residential condominium units; and (c) the replacement, reconfiguration, and expansion of the existing gangway platform, pier walkway, and dock facilities on the site.	201–207 Carnation Ave and 101 Bayside Pl; southwest of Bayside Drive between Bayside Pl and Carnation Ave, Corona del Mar
Meridian (Santa Barbara) Condominiums Project (PA2004-169)	79 condominium units totaling approximately 205,232 net sf; approximately 97,231 gross sf of subterranean parking structures for a total of 201 parking spaces on site; approximately 79,140 sf of open space and approximately 21,300 sf of recreational area.	Santa Barbara Drive west of Fashion Island
Newport Marina – ETCO Development (PA2001-210)	A mixed use development consisting of 27 residential units and approximately 36,000 square feet of retail and office uses	2300 Newport Boulevard
Mariner's Pointe (PA2010-114)	A 19,905-sf, two-story commercial building and a three-story parking structure.	200-300 West Coast Highway
Newport Business Plaza Project	Demolition of 2 existing connected buildings to construct a new 46,044 gross square foot business plaza.	4699 Jamboree Road and 5190 Campus Drive

Project	Proposed Land Uses	Location
PRES Office Building B Project	Increase the maximum allowable entitlement by 11,544 gross sf; increase the maximum allowable entitlement in office suite B by 9,917 net sf to allow for development of a new 2-level office building over a ground-level parking structure.	4300 Von Karman Ave

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4 FINDINGS & CONCLUSIONS

4.1 CONSTRUCTION-SOURCE EMISSIONS

For regional emissions, the Project would not exceed the numerical thresholds of significance established by the South Coast Air Quality Management District (SCAQMD). Thus a less than significant impact will occur.

Additionally, emissions during construction activity will not exceed the SCAQMD's localized significance threshold. Therefore, a less than significant impact would occur.

Project construction-source emissions would not conflict with the applicable Air Quality Management Plan (AQMP).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

4.2 OPERATIONAL-SOURCE EMISSIONS

For regional emissions, the Project would not exceed the numerical thresholds of significance established by the SCAQMD. Thus a less than significant impact would occur for Project-related operational-source emissions.

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during operational activity is expected.

Project operational-source emissions would not conflict with the AQMP.

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous residential refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (1) . Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

4.3 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits.

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (20); Rule 431.2 (Low Sulfur Fuel) (21); Rule 403 (Fugitive Dust) (22); and Rule 1186 / 1186.1 (Street Sweepers) (23). It should be noted that BACMs are not mitigation as they are standard regulatory requirements.

BACM AQ-1

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (4):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less

5 REFERENCES

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6 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Newport Center Villas Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994 ext. 217.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

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Newport Center Villas

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	8.50	1000sqft	0.20	8,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**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 -

Construction Phase -

Off-road Equipment - No construction needed.

Vehicle Trips - Derived from Land Use parameters and Table 3 of "Newport Center Villas Traffic and Parking Evaluation"

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	62.00	96.35
tblVehicleTrips	SU_TR	62.00	96.35
tblVehicleTrips	WD_TR	62.00	96.35

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3488	11.2878	9.2219	0.0133	0.1118	0.8047	0.9164	0.0296	0.7681	0.7977	0.0000	1,301.0674	1,301.0674	0.2440	0.0000	1,306.1906
Total	**1.3488**	**11.2878**	**9.2219**	**0.0133**	**0.1118**	**0.8047**	**0.9164**	**0.0296**	**0.7681**	**0.7977**	**0.0000**	**1,301.0674**	**1,301.0674**	**0.2440**	**0.0000**	**1,306.1906**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3488	11.2878	9.2219	0.0133	0.1118	0.8047	0.9164	0.0296	0.7681	0.7977	0.0000	1,301.0674	1,301.0674	0.2440	0.0000	1,306.1906
Total	**1.3488**	**11.2878**	**9.2219**	**0.0133**	**0.1118**	**0.8047**	**0.9164**	**0.0296**	**0.7681**	**0.7977**	**0.0000**	**1,301.0674**	**1,301.0674**	**0.2440**	**0.0000**	**1,306.1906**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Energy	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Mobile	2.0409	2.9220	14.9455	0.0321	2.3180	0.0379	2.3559	0.6185	0.0350	0.6535		2,612.7704	2,612.7704	0.1076		2,615.0301
Total	**2.2687**	**2.9714**	**14.9879**	**0.0324**	**2.3180**	**0.0417**	**2.3597**	**0.6185**	**0.0387**	**0.6572**		**2,672.0599**	**2,672.0599**	**0.1088**	**1.0900e-003**	**2,674.6806**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Energy	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Mobile	2.0409	2.9220	14.9455	0.0321	2.3180	0.0379	2.3559	0.6185	0.0350	0.6535		2,612.7704	2,612.7704	0.1076		2,615.0301
Total	**2.2687**	**2.9714**	**14.9879**	**0.0324**	**2.3180**	**0.0417**	**2.3597**	**0.6185**	**0.0387**	**0.6572**		**2,672.0599**	**2,672.0599**	**0.1088**	**1.0900e-003**	**2,674.6806**

	ROG	NOx	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	1/1/2016	1/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

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	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**		**0.8039**	**0.8039**		**0.7674**	**0.7674**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

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	0.0365	0.0493	0.5171	1.2800e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		107.4568	107.4568	5.3400e-003		107.5688
Total	**0.0365**	**0.0493**	**0.5171**	**1.2800e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**107.4568**	**107.4568**	**5.3400e-003**		**107.5688**

3.2 Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**		**0.8039**	**0.8039**		**0.7674**	**0.7674**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

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	0.0365	0.0493	0.5171	1.2800e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		107.4568	107.4568	5.3400e-003		107.5688
Total	**0.0365**	**0.0493**	**0.5171**	**1.2800e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**107.4568**	**107.4568**	**5.3400e-003**		**107.5688**

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	2.0409	2.9220	14.9455	0.0321	2.3180	0.0379	2.3559	0.6185	0.0350	0.6535		2,612.7704	2,612.7704	0.1076		2,615.0301
Unmitigated	2.0409	2.9220	14.9455	0.0321	2.3180	0.0379	2.3559	0.6185	0.0350	0.6535		2,612.7704	2,612.7704	0.1076		2,615.0301

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	818.98	818.98	818.98	1,097,059	1,097,059
Total	818.98	818.98	818.98	1,097,059	1,097,059

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
NaturalGas Unmitigated	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	503.945	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Total		**5.4300e-003**	**0.0494**	**0.0415**	**3.0000e-004**		**3.7500e-003**	**3.7500e-003**		**3.7500e-003**	**3.7500e-003**		**59.2877**	**59.2877**	**1.1400e-003**	**1.0900e-003**	**59.6485**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.503945	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Total		**5.4300e-003**	**0.0494**	**0.0415**	**3.0000e-004**		**3.7500e-003**	**3.7500e-003**		**3.7500e-003**	**3.7500e-003**		**59.2877**	**59.2877**	**1.1400e-003**	**1.0900e-003**	**59.6485**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Unmitigated	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1683					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Total	**0.2224**	**1.0000e-005**	**8.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8600e-003**	**1.8600e-003**	**1.0000e-005**		**1.9700e-003**

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					
Consumer Products	0.1683					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2224**	**1.0000e-005**	**8.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8600e-003**	**1.8600e-003**	**1.0000e-005**		**1.9700e-003**

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

Newport Center Villas

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	8.50	1000sqft	0.20	8,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**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 -

Construction Phase -

Off-road Equipment - No construction needed.

Vehicle Trips - Derived from Land Use parameters and Table 3 of "Newport Center Villas Traffic and Parking Evaluation"

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	62.00	96.35
tblVehicleTrips	SU_TR	62.00	96.35
tblVehicleTrips	WD_TR	62.00	96.35

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3469	11.2833	9.2537	0.0134	0.1118	0.8047	0.9164	0.0296	0.7681	0.7977	0.0000	1,307.0708	1,307.0708	0.2440	0.0000	1,312.1939
Total	**1.3469**	**11.2833**	**9.2537**	**0.0134**	**0.1118**	**0.8047**	**0.9164**	**0.0296**	**0.7681**	**0.7977**	**0.0000**	**1,307.0708**	**1,307.0708**	**0.2440**	**0.0000**	**1,312.1939**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3469	11.2833	9.2537	0.0134	0.1118	0.8047	0.9164	0.0296	0.7681	0.7977	0.0000	1,307.0708	1,307.0708	0.2440	0.0000	1,312.1939
Total	**1.3469**	**11.2833**	**9.2537**	**0.0134**	**0.1118**	**0.8047**	**0.9164**	**0.0296**	**0.7681**	**0.7977**	**0.0000**	**1,307.0708**	**1,307.0708**	**0.2440**	**0.0000**	**1,312.1939**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Energy	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Mobile	1.9017	2.7862	14.1263	0.0335	2.3180	0.0376	2.3556	0.6185	0.0347	0.6532		2,730.0795	2,730.0795	0.1075		2,732.3365
Total	**2.1295**	**2.8356**	**14.1687**	**0.0338**	**2.3180**	**0.0414**	**2.3594**	**0.6185**	**0.0385**	**0.6570**		**2,789.3690**	**2,789.3690**	**0.1086**	**1.0900e-003**	**2,791.9870**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Energy	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Mobile	1.9017	2.7862	14.1263	0.0335	2.3180	0.0376	2.3556	0.6185	0.0347	0.6532		2,730.0795	2,730.0795	0.1075		2,732.3365
Total	**2.1295**	**2.8356**	**14.1687**	**0.0338**	**2.3180**	**0.0414**	**2.3594**	**0.6185**	**0.0385**	**0.6570**		**2,789.3690**	**2,789.3690**	**0.1086**	**1.0900e-003**	**2,791.9870**

	ROG	NOx	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	1/1/2016	1/14/2016	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

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	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674		1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**		**0.8039**	**0.8039**		**0.7674**	**0.7674**		**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

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	0.0347	0.0448	0.5490	1.3600e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		113.4602	113.4602	5.3400e-003		113.5722
Total	**0.0347**	**0.0448**	**0.5490**	**1.3600e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**113.4602**	**113.4602**	**5.3400e-003**		**113.5722**

3.2 Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3122	11.2385	8.7048	0.0120		0.8039	0.8039		0.7674	0.7674	0.0000	1,193.6106	1,193.6106	0.2386		1,198.6217
Total	**1.3122**	**11.2385**	**8.7048**	**0.0120**		**0.8039**	**0.8039**		**0.7674**	**0.7674**	**0.0000**	**1,193.6106**	**1,193.6106**	**0.2386**		**1,198.6217**

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	0.0347	0.0448	0.5490	1.3600e-003	0.1118	7.8000e-004	0.1126	0.0296	7.2000e-004	0.0304		113.4602	113.4602	5.3400e-003		113.5722
Total	**0.0347**	**0.0448**	**0.5490**	**1.3600e-003**	**0.1118**	**7.8000e-004**	**0.1126**	**0.0296**	**7.2000e-004**	**0.0304**		**113.4602**	**113.4602**	**5.3400e-003**		**113.5722**

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	1.9017	2.7862	14.1263	0.0335	2.3180	0.0376	2.3556	0.6185	0.0347	0.6532		2,730.0795	2,730.0795	0.1075		2,732.3365
Unmitigated	1.9017	2.7862	14.1263	0.0335	2.3180	0.0376	2.3556	0.6185	0.0347	0.6532		2,730.0795	2,730.0795	0.1075		2,732.3365

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	818.98	818.98	818.98	1,097,059	1,097,059
Total	818.98	818.98	818.98	1,097,059	1,097,059

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	16.60	8.40	6.90	33.00	48.00	19.00	21	51	28

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
NaturalGas Unmitigated	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	503.945	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Total		**5.4300e-003**	**0.0494**	**0.0415**	**3.0000e-004**		**3.7500e-003**	**3.7500e-003**		**3.7500e-003**	**3.7500e-003**		**59.2877**	**59.2877**	**1.1400e-003**	**1.0900e-003**	**59.6485**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.503945	5.4300e-003	0.0494	0.0415	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003		59.2877	59.2877	1.1400e-003	1.0900e-003	59.6485
Total		**5.4300e-003**	**0.0494**	**0.0415**	**3.0000e-004**		**3.7500e-003**	**3.7500e-003**		**3.7500e-003**	**3.7500e-003**		**59.2877**	**59.2877**	**1.1400e-003**	**1.0900e-003**	**59.6485**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Unmitigated	0.2224	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003

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					
Consumer Products	0.1683					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2224**	**1.0000e-005**	**8.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8600e-003**	**1.8600e-003**	**1.0000e-005**		**1.9700e-003**

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					
Consumer Products	0.1683					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.8600e-003	1.8600e-003	1.0000e-005		1.9700e-003
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2224**	**1.0000e-005**	**8.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.8600e-003**	**1.8600e-003**	**1.0000e-005**		**1.9700e-003**

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

Newport Center Villas

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	126.00	Space	1.13	50,400.00	0
Condo/Townhouse High Rise	49.00	Dwelling Unit	0.77	49,000.00	140

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**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 -

Construction Phase - Construction Duration: 2 years

Demolition -

Grading -

Vehicle Trips - Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook (9th Edition, 2012)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	400.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	4.00	30.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	4.00
tblGrading	AcresOfGrading	11.25	3.00
tblGrading	MaterialExported	0.00	51,600.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	7.16	4.31
tblVehicleTrips	SU_TR	6.07	3.43
tblVehicleTrips	WD_TR	6.59	4.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.2212	82.3497	63.4320	0.1730	8.6519	2.0344	10.6863	3.5728	1.8714	5.4442	0.0000	17,449.6219	17,449.6219	0.6358	0.0000	17,462.9745
2017	39.1508	20.4061	18.4597	0.0319	0.7072	1.2460	1.9532	0.1892	1.2010	1.3902	0.0000	2,887.7331	2,887.7331	0.4566	0.0000	2,897.3210
2018	39.1138	2.0507	2.3265	4.3800e-003	0.1230	0.1514	0.2743	0.0326	0.1513	0.1839	0.0000	390.8134	390.8134	0.0318	0.0000	391.4817
Total	**84.4858**	**104.8065**	**84.2182**	**0.2093**	**9.4820**	**3.4318**	**12.9138**	**3.7946**	**3.2237**	**7.0183**	**0.0000**	**20,728.1684**	**20,728.1684**	**1.1242**	**0.0000**	**20,751.7773**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	6.2212	82.3497	63.4320	0.1730	8.6519	2.0344	10.6863	3.5728	1.8714	5.4442	0.0000	17,449.6219	17,449.6219	0.6358	0.0000	17,462.9745
2017	39.1508	20.4061	18.4597	0.0319	0.7072	1.2460	1.9532	0.1892	1.2010	1.3902	0.0000	2,887.7331	2,887.7331	0.4566	0.0000	2,897.3210
2018	39.1138	2.0507	2.3265	4.3800e-003	0.1230	0.1514	0.2743	0.0326	0.1513	0.1839	0.0000	390.8134	390.8134	0.0318	0.0000	391.4817
Total	**84.4858**	**104.8065**	**84.2182**	**0.2093**	**9.4820**	**3.4318**	**12.9138**	**3.7946**	**3.2237**	**7.0183**	**0.0000**	**20,728.1684**	**20,728.1684**	**1.1242**	**0.0000**	**20,751.7773**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Energy	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Mobile	0.6427	1.5698	7.0529	0.0203	1.5248	0.0224	1.5473	0.4069	0.0207	0.4275		1,655.5835	1,655.5835	0.0631		1,656.9080
Total	**16.0252**	**2.1387**	**35.8499**	**0.0610**	**1.5248**	**3.8035**	**5.3284**	**0.4069**	**3.8012**	**4.2081**	**458.9790**	**2,794.8284**	**3,253.8074**	**1.4439**	**0.0357**	**3,295.2072**

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	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Energy	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Mobile	0.6427	1.5698	7.0529	0.0203	1.5248	0.0224	1.5473	0.4069	0.0207	0.4275		1,655.5835	1,655.5835	0.0631		1,656.9080
Total	**16.0252**	**2.1387**	**35.8499**	**0.0610**	**1.5248**	**3.8035**	**5.3284**	**0.4069**	**3.8012**	**4.2081**	**458.9790**	**2,794.8284**	**3,253.8074**	**1.4439**	**0.0357**	**3,295.2072**

	ROG	NOx	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	1/1/2016	2/25/2016	5	40	
2	Site Preparation	Site Preparation	2/26/2016	3/2/2016	5	4	
3	Grading	Grading	3/3/2016	4/13/2016	5	30	
4	Building Construction	Building Construction	4/14/2016	10/25/2017	5	400	
5	Paving	Paving	10/26/2017	11/22/2017	5	20	
6	Architectural Coating	Architectural Coating	11/23/2017	1/17/2018	5	40	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 99,225; Residential Outdoor: 33,075; Non-Residential Indoor: 75,600; Non-Residential Outdoor: 25,200 (Architectural Coating – sqft)

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	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	5	13.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	6,450.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0428	0.0000	0.0428	6.4800e-003	0.0000	6.4800e-003			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.0428**	**1.7445**	**1.7873**	**6.4800e-003**	**1.6328**	**1.6392**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

3.2 Demolition - 2016

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	3.9100e-003	0.0570	0.0459	1.5000e-004	3.4800e-003	8.3000e-004	4.3100e-003	9.5000e-004	7.6000e-004	1.7200e-003		14.7915	14.7915	1.1000e-004		14.7937
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	0.0475	0.0641	0.6722	1.6700e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		139.6938	139.6938	6.9400e-003		139.8395
Total	**0.0514**	**0.1211**	**0.7182**	**1.8200e-003**	**0.1488**	**1.8500e-003**	**0.1506**	**0.0395**	**1.7000e-003**	**0.0412**		**154.4853**	**154.4853**	**7.0500e-003**		**154.6332**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0428	0.0000	0.0428	6.4800e-003	0.0000	6.4800e-003			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328	0.0000	2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.0428**	**1.7445**	**1.7873**	**6.4800e-003**	**1.6328**	**1.6392**	**0.0000**	**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

3.2 Demolition - 2016

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	3.9100e-003	0.0570	0.0459	1.5000e-004	3.4800e-003	8.3000e-004	4.3100e-003	9.5000e-004	7.6000e-004	1.7200e-003		14.7915	14.7915	1.1000e-004		14.7937
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	0.0475	0.0641	0.6722	1.6700e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		139.6938	139.6938	6.9400e-003		139.8395
Total	**0.0514**	**0.1211**	**0.7182**	**1.8200e-003**	**0.1488**	**1.8500e-003**	**0.1506**	**0.0395**	**1.7000e-003**	**0.0412**		**154.4853**	**154.4853**	**7.0500e-003**		**154.6332**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

3.3 Site Preparation - 2016

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	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**0.0292**	**0.0394**	**0.4137**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**85.9654**	**85.9654**	**4.2700e-003**		**86.0551**

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866	0.0000	1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**	**0.0000**	**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

3.3 Site Preparation - 2016

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	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**0.0292**	**0.0394**	**0.4137**	**1.0300e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**85.9654**	**85.9654**	**4.2700e-003**		**86.0551**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8171	0.0000	4.8171	2.5236	0.0000	2.5236			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.8171**	**1.1407**	**5.9578**	**2.5236**	**1.0494**	**3.5730**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

3.4 Grading - 2016

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	4.2012	61.2742	49.3480	0.1579	3.7453	0.8931	4.6384	1.0256	0.8214	1.8469		15,900.8096	15,900.8096	0.1148		15,903.2201
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	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**4.2304**	**61.3136**	**49.7617**	**0.1589**	**3.8348**	**0.8937**	**4.7284**	**1.0493**	**0.8219**	**1.8712**		**15,986.7751**	**15,986.7751**	**0.1191**		**15,989.2752**

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					4.8171	0.0000	4.8171	2.5236	0.0000	2.5236			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494	0.0000	1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.8171**	**1.1407**	**5.9578**	**2.5236**	**1.0494**	**3.5730**	**0.0000**	**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

3.4 Grading - 2016

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	4.2012	61.2742	49.3480	0.1579	3.7453	0.8931	4.6384	1.0256	0.8214	1.8469		15,900.8096	15,900.8096	0.1148		15,903.2201
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	0.0292	0.0394	0.4137	1.0300e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		85.9654	85.9654	4.2700e-003		86.0551
Total	**4.2304**	**61.3136**	**49.7617**	**0.1589**	**3.8348**	**0.8937**	**4.7284**	**1.0493**	**0.8219**	**1.8712**		**15,986.7751**	**15,986.7751**	**0.1191**		**15,989.2752**

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	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.5 Building Construction - 2016

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	0.1260	1.1510	1.5969	2.7900e-003	0.0812	0.0180	0.0993	0.0231	0.0166	0.0397		279.5395	279.5395	2.0600e-003		279.5828
Worker	0.2045	0.2761	2.8958	7.1900e-003	0.6260	4.3700e-003	0.6303	0.1660	4.0300e-003	0.1700		601.7580	601.7580	0.0299		602.3854
Total	**0.3305**	**1.4271**	**4.4927**	**9.9800e-003**	**0.7072**	**0.0224**	**0.7296**	**0.1891**	**0.0206**	**0.2097**		**881.2974**	**881.2974**	**0.0319**		**881.9682**

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	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.5 Building Construction - 2016

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	0.1260	1.1510	1.5969	2.7900e-003	0.0812	0.0180	0.0993	0.0231	0.0166	0.0397		279.5395	279.5395	2.0600e-003		279.5828
Worker	0.2045	0.2761	2.8958	7.1900e-003	0.6260	4.3700e-003	0.6303	0.1660	4.0300e-003	0.1700		601.7580	601.7580	0.0299		602.3854
Total	**0.3305**	**1.4271**	**4.4927**	**9.9800e-003**	**0.7072**	**0.0224**	**0.7296**	**0.1891**	**0.0206**	**0.2097**		**881.2974**	**881.2974**	**0.0319**		**881.9682**

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	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1159	1.0466	1.5151	2.7900e-003	0.0813	0.0161	0.0973	0.0231	0.0148	0.0379		274.9837	274.9837	2.0000e-003		275.0257
Worker	0.1859	0.2507	2.6336	7.1900e-003	0.6260	4.2800e-003	0.6302	0.1660	3.9500e-003	0.1700		578.4634	578.4634	0.0277		579.0457
Total	**0.3018**	**1.2972**	**4.1487**	**9.9800e-003**	**0.7072**	**0.0204**	**0.7276**	**0.1891**	**0.0187**	**0.2079**		**853.4471**	**853.4471**	**0.0297**		**854.0714**

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	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1159	1.0466	1.5151	2.7900e-003	0.0813	0.0161	0.0973	0.0231	0.0148	0.0379		274.9837	274.9837	2.0000e-003		275.0257
Worker	0.1859	0.2507	2.6336	7.1900e-003	0.6260	4.2800e-003	0.6302	0.1660	3.9500e-003	0.1700		578.4634	578.4634	0.0277		579.0457
Total	**0.3018**	**1.2972**	**4.1487**	**9.9800e-003**	**0.7072**	**0.0204**	**0.7276**	**0.1891**	**0.0187**	**0.2079**		**853.4471**	**853.4471**	**0.0297**		**854.0714**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1857**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**		**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**0.0432**	**0.0582**	**0.6114**	**1.6700e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**134.2862**	**134.2862**	**6.4400e-003**		**134.4213**

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	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1857**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**	**0.0000**	**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0432	0.0582	0.6114	1.6700e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		134.2862	134.2862	6.4400e-003		134.4213
Total	**0.0432**	**0.0582**	**0.6114**	**1.6700e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**134.2862**	**134.2862**	**6.4400e-003**		**134.4213**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.7819					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	**39.1142**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0365	0.0492	0.5173	1.4100e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		113.6267	113.6267	5.4500e-003		113.7411
Total	**0.0365**	**0.0492**	**0.5173**	**1.4100e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**113.6267**	**113.6267**	**5.4500e-003**		**113.7411**

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	38.7819					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	**39.1142**	**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**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0365	0.0492	0.5173	1.4100e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		113.6267	113.6267	5.4500e-003		113.7411
Total	**0.0365**	**0.0492**	**0.5173**	**1.4100e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**113.6267**	**113.6267**	**5.4500e-003**		**113.7411**

3.7 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	38.7819					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	**39.0805**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0333	0.0449	0.4723	1.4100e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		109.3648	109.3648	5.0800e-003		109.4716
Total	**0.0333**	**0.0449**	**0.4723**	**1.4100e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**109.3648**	**109.3648**	**5.0800e-003**		**109.4716**

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	38.7819					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	**39.0805**	**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**

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0333	0.0449	0.4723	1.4100e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		109.3648	109.3648	5.0800e-003		109.4716
Total	**0.0333**	**0.0449**	**0.4723**	**1.4100e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**109.3648**	**109.3648**	**5.0800e-003**		**109.4716**

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	0.6427	1.5698	7.0529	0.0203	1.5248	0.0224	1.5473	0.4069	0.0207	0.4275		1,655.5835	1,655.5835	0.0631		1,656.9080
Unmitigated	0.6427	1.5698	7.0529	0.0203	1.5248	0.0224	1.5473	0.4069	0.0207	0.4275		1,655.5835	1,655.5835	0.0631		1,656.9080

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	204.82	211.19	168.07	685,071	685,071
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	204.82	211.19	168.07	685,071	685,071

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
Condo/Townhouse High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
NaturalGas Unmitigated	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593

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					
Condo/Townhouse High Rise	2124.47	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Enclosed Parking with Elevator	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		**0.0229**	**0.1958**	**0.0833**	**1.2500e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**		**249.9382**	**249.9382**	**4.7900e-003**	**4.5800e-003**	**251.4593**

5.2 Energy by Land Use - NaturalGas

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					
Condo/Townhouse High Rise	2.12447	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Enclosed Parking with Elevator	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		**0.0229**	**0.1958**	**0.0833**	**1.2500e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**		**249.9382**	**249.9382**	**4.7900e-003**	**4.5800e-003**	**251.4593**

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	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Unmitigated	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.8398	0.3258	24.6295	0.0392		3.7430	3.7430		3.7424	3.7424	458.9790	882.0000	1,340.9790	1.3688	0.0312	1,379.3802
Landscaping	0.1267	0.0474	4.0842	2.1000e-004		0.0223	0.0223		0.0223	0.0223		7.3066	7.3066	7.2900e-003		7.4597
Total	**15.3596**	**0.3731**	**28.7136**	**0.0394**		**3.7653**	**3.7653**		**3.7647**	**3.7647**	**458.9790**	**889.3066**	**1,348.2856**	**1.3761**	**0.0312**	**1,386.8400**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.8398	0.3258	24.6295	0.0392		3.7430	3.7430		3.7424	3.7424	458.9790	882.0000	1,340.9790	1.3688	0.0312	1,379.3802
Landscaping	0.1267	0.0474	4.0842	2.1000e-004		0.0223	0.0223		0.0223	0.0223		7.3066	7.3066	7.2900e-003		7.4597
Total	**15.3596**	**0.3731**	**28.7136**	**0.0394**		**3.7653**	**3.7653**		**3.7647**	**3.7647**	**458.9790**	**889.3066**	**1,348.2856**	**1.3761**	**0.0312**	**1,386.8400**

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

Newport Center Villas

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	126.00	Space	1.13	50,400.00	0
Condo/Townhouse High Rise	49.00	Dwelling Unit	0.77	49,000.00	140

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**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 -

Construction Phase - Construction Duration: 2 years

Demolition -

Grading -

Vehicle Trips - Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook (9th Edition, 2012)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDays	200.00	400.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	4.00	30.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	4.00
tblGrading	AcresOfGrading	11.25	3.00
tblGrading	MaterialExported	0.00	51,600.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	7.16	4.31
tblVehicleTrips	SU_TR	6.07	3.43
tblVehicleTrips	WD_TR	6.59	4.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.9468	80.3156	57.1055	0.1733	8.6519	2.0322	10.6841	3.5728	1.8694	5.4422	0.0000	17,492.4154	17,492.4154	0.6358	0.0000	17,505.7680
2017	39.1490	20.3598	18.3652	0.0324	0.7072	1.2458	1.9531	0.1892	1.2009	1.3900	0.0000	2,922.4223	2,922.4223	0.4565	0.0000	2,932.0089
2018	39.1123	2.0466	2.3587	4.4600e-003	0.1230	0.1514	0.2743	0.0326	0.1513	0.1839	0.0000	396.9338	396.9338	0.0318	0.0000	397.6021
Total	**84.2080**	**102.7220**	**77.8294**	**0.2101**	**9.4820**	**3.4294**	**12.9115**	**3.7946**	**3.2216**	**7.0162**	**0.0000**	**20,811.7715**	**20,811.7715**	**1.1242**	**0.0000**	**20,835.3791**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.9468	80.3156	57.1055	0.1733	8.6519	2.0322	10.6841	3.5728	1.8694	5.4422	0.0000	17,492.4154	17,492.4154	0.6358	0.0000	17,505.7680
2017	39.1490	20.3598	18.3652	0.0324	0.7072	1.2458	1.9531	0.1892	1.2009	1.3900	0.0000	2,922.4223	2,922.4223	0.4565	0.0000	2,932.0089
2018	39.1123	2.0466	2.3587	4.4600e-003	0.1230	0.1514	0.2743	0.0326	0.1513	0.1839	0.0000	396.9338	396.9338	0.0318	0.0000	397.6021
Total	**84.2080**	**102.7220**	**77.8294**	**0.2101**	**9.4820**	**3.4294**	**12.9115**	**3.7946**	**3.2216**	**7.0162**	**0.0000**	**20,811.7715**	**20,811.7715**	**1.1242**	**0.0000**	**20,835.3791**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Energy	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Mobile	0.6099	1.4866	7.1414	0.0213	1.5248	0.0223	1.5472	0.4069	0.0206	0.4275		1,730.8483	1,730.8483	0.0630		1,732.1721
Total	**15.9925**	**2.0556**	**35.9384**	**0.0619**	**1.5248**	**3.8035**	**5.3283**	**0.4069**	**3.8011**	**4.2080**	**458.9790**	**2,870.0932**	**3,329.0722**	**1.4439**	**0.0357**	**3,370.4714**

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	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Energy	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Mobile	0.6099	1.4866	7.1414	0.0213	1.5248	0.0223	1.5472	0.4069	0.0206	0.4275		1,730.8483	1,730.8483	0.0630		1,732.1721
Total	**15.9925**	**2.0556**	**35.9384**	**0.0619**	**1.5248**	**3.8035**	**5.3283**	**0.4069**	**3.8011**	**4.2080**	**458.9790**	**2,870.0932**	**3,329.0722**	**1.4439**	**0.0357**	**3,370.4714**

	ROG	NOx	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	1/1/2016	2/25/2016	5	40	
2	Site Preparation	Site Preparation	2/26/2016	3/2/2016	5	4	
3	Grading	Grading	3/3/2016	4/13/2016	5	30	
4	Building Construction	Building Construction	4/14/2016	10/25/2017	5	400	
5	Paving	Paving	10/26/2017	11/22/2017	5	20	
6	Architectural Coating	Architectural Coating	11/23/2017	1/17/2018	5	40	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 99,225; Residential Outdoor: 33,075; Non-Residential Indoor: 75,600; Non-Residential Outdoor: 25,200 (Architectural Coating – sqft)

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	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	5	13.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	6,450.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0428	0.0000	0.0428	6.4800e-003	0.0000	6.4800e-003			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.0428**	**1.7445**	**1.7873**	**6.4800e-003**	**1.6328**	**1.6392**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

3.2 Demolition - 2016

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	3.6500e-003	0.0551	0.0400	1.5000e-004	3.4800e-003	8.3000e-004	4.3100e-003	9.5000e-004	7.6000e-004	1.7200e-003		14.8268	14.8268	1.1000e-004		14.8290
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	0.0451	0.0583	0.7137	1.7600e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		147.4982	147.4982	6.9400e-003		147.6439
Total	**0.0488**	**0.1134**	**0.7537**	**1.9100e-003**	**0.1488**	**1.8500e-003**	**0.1506**	**0.0395**	**1.7000e-003**	**0.0412**		**162.3250**	**162.3250**	**7.0500e-003**		**162.4729**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0428	0.0000	0.0428	6.4800e-003	0.0000	6.4800e-003			0.0000			0.0000
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328	0.0000	2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**	**0.0428**	**1.7445**	**1.7873**	**6.4800e-003**	**1.6328**	**1.6392**	**0.0000**	**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

3.2 Demolition - 2016

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	3.6500e-003	0.0551	0.0400	1.5000e-004	3.4800e-003	8.3000e-004	4.3100e-003	9.5000e-004	7.6000e-004	1.7200e-003		14.8268	14.8268	1.1000e-004		14.8290
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	0.0451	0.0583	0.7137	1.7600e-003	0.1453	1.0200e-003	0.1463	0.0385	9.4000e-004	0.0395		147.4982	147.4982	6.9400e-003		147.6439
Total	**0.0488**	**0.1134**	**0.7537**	**1.9100e-003**	**0.1488**	**1.8500e-003**	**0.1506**	**0.0395**	**1.7000e-003**	**0.0412**		**162.3250**	**162.3250**	**7.0500e-003**		**162.4729**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

3.3 Site Preparation - 2016

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	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866	0.0000	1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**	**0.0000**	**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

3.3 Site Preparation - 2016

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	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**0.0278**	**0.0359**	**0.4392**	**1.0900e-003**	**0.0894**	**6.2000e-004**	**0.0901**	**0.0237**	**5.8000e-004**	**0.0243**		**90.7681**	**90.7681**	**4.2700e-003**		**90.8578**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8171	0.0000	4.8171	2.5236	0.0000	2.5236			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.8171**	**1.1407**	**5.9578**	**2.5236**	**1.0494**	**3.5730**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

3.4 Grading - 2016

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	3.9283	59.2436	42.9960	0.1582	3.7453	0.8909	4.6362	1.0256	0.8194	1.8449		15,938.8005	15,938.8005	0.1133		15,941.1791
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	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**3.9560**	**59.2795**	**43.4351**	**0.1593**	**3.8348**	**0.8915**	**4.7263**	**1.0493**	**0.8199**	**1.8692**		**16,029.5686**	**16,029.5686**	**0.1175**		**16,032.0369**

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					4.8171	0.0000	4.8171	2.5236	0.0000	2.5236			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494	0.0000	1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.8171**	**1.1407**	**5.9578**	**2.5236**	**1.0494**	**3.5730**	**0.0000**	**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

3.4 Grading - 2016

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	3.9283	59.2436	42.9960	0.1582	3.7453	0.8909	4.6362	1.0256	0.8194	1.8449		15,938.8005	15,938.8005	0.1133		15,941.1791
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	0.0278	0.0359	0.4392	1.0900e-003	0.0894	6.2000e-004	0.0901	0.0237	5.8000e-004	0.0243		90.7681	90.7681	4.2700e-003		90.8578
Total	**3.9560**	**59.2795**	**43.4351**	**0.1593**	**3.8348**	**0.8915**	**4.7263**	**1.0493**	**0.8199**	**1.8692**		**16,029.5686**	**16,029.5686**	**0.1175**		**16,032.0369**

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	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.5 Building Construction - 2016

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	0.1137	1.1245	1.3288	2.8100e-003	0.0812	0.0178	0.0991	0.0231	0.0164	0.0395		281.9165	281.9165	2.0000e-003		281.9586
Worker	0.1943	0.2510	3.0743	7.6000e-003	0.6260	4.3700e-003	0.6303	0.1660	4.0300e-003	0.1700		635.3769	635.3769	0.0299		636.0043
Total	**0.3079**	**1.3755**	**4.4030**	**0.0104**	**0.7072**	**0.0222**	**0.7294**	**0.1891**	**0.0204**	**0.2096**		**917.2934**	**917.2934**	**0.0319**		**917.9629**

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	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.5 Building Construction - 2016

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	0.1137	1.1245	1.3288	2.8100e-003	0.0812	0.0178	0.0991	0.0231	0.0164	0.0395		281.9165	281.9165	2.0000e-003		281.9586
Worker	0.1943	0.2510	3.0743	7.6000e-003	0.6260	4.3700e-003	0.6303	0.1660	4.0300e-003	0.1700		635.3769	635.3769	0.0299		636.0043
Total	**0.3079**	**1.3755**	**4.4030**	**0.0104**	**0.7072**	**0.0222**	**0.7294**	**0.1891**	**0.0204**	**0.2096**		**917.2934**	**917.2934**	**0.0319**		**917.9629**

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	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1049	1.0231	1.2501	2.8100e-003	0.0813	0.0159	0.0972	0.0231	0.0146	0.0378		277.3280	277.3280	1.9400e-003		277.3687
Worker	0.1769	0.2279	2.8042	7.6000e-003	0.6260	4.2800e-003	0.6302	0.1660	3.9500e-003	0.1700		610.8083	610.8083	0.0277		611.3906
Total	**0.2818**	**1.2510**	**4.0542**	**0.0104**	**0.7072**	**0.0202**	**0.7274**	**0.1891**	**0.0186**	**0.2077**		**888.1363**	**888.1363**	**0.0297**		**888.7593**

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	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1049	1.0231	1.2501	2.8100e-003	0.0813	0.0159	0.0972	0.0231	0.0146	0.0378		277.3280	277.3280	1.9400e-003		277.3687
Worker	0.1769	0.2279	2.8042	7.6000e-003	0.6260	4.2800e-003	0.6302	0.1660	3.9500e-003	0.1700		610.8083	610.8083	0.0277		611.3906
Total	**0.2818**	**1.2510**	**4.0542**	**0.0104**	**0.7072**	**0.0202**	**0.7274**	**0.1891**	**0.0186**	**0.2077**		**888.1363**	**888.1363**	**0.0297**		**888.7593**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1857**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**		**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.6 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

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	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1857**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**	**0.0000**	**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.6 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0411	0.0529	0.6510	1.7600e-003	0.1453	9.9000e-004	0.1463	0.0385	9.2000e-004	0.0395		141.7948	141.7948	6.4400e-003		141.9300
Total	**0.0411**	**0.0529**	**0.6510**	**1.7600e-003**	**0.1453**	**9.9000e-004**	**0.1463**	**0.0385**	**9.2000e-004**	**0.0395**		**141.7948**	**141.7948**	**6.4400e-003**		**141.9300**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.7819					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	**39.1142**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.7 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0348	0.0448	0.5508	1.4900e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		119.9802	119.9802	5.4500e-003		120.0946
Total	**0.0348**	**0.0448**	**0.5508**	**1.4900e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**119.9802**	**119.9802**	**5.4500e-003**		**120.0946**

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	38.7819					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	**39.1142**	**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**

3.7 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0348	0.0448	0.5508	1.4900e-003	0.1230	8.4000e-004	0.1238	0.0326	7.8000e-004	0.0334		119.9802	119.9802	5.4500e-003		120.0946
Total	**0.0348**	**0.0448**	**0.5508**	**1.4900e-003**	**0.1230**	**8.4000e-004**	**0.1238**	**0.0326**	**7.8000e-004**	**0.0334**		**119.9802**	**119.9802**	**5.4500e-003**		**120.0946**

3.7 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	38.7819					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	**39.0805**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

3.7 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0317	0.0409	0.5045	1.4900e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		115.4852	115.4852	5.0800e-003		115.5920
Total	**0.0317**	**0.0409**	**0.5045**	**1.4900e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**115.4852**	**115.4852**	**5.0800e-003**		**115.5920**

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	38.7819					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	**39.0805**	**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**

3.7 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0317	0.0409	0.5045	1.4900e-003	0.1230	8.3000e-004	0.1238	0.0326	7.7000e-004	0.0334		115.4852	115.4852	5.0800e-003		115.5920
Total	**0.0317**	**0.0409**	**0.5045**	**1.4900e-003**	**0.1230**	**8.3000e-004**	**0.1238**	**0.0326**	**7.7000e-004**	**0.0334**		**115.4852**	**115.4852**	**5.0800e-003**		**115.5920**

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	0.6099	1.4866	7.1414	0.0213	1.5248	0.0223	1.5472	0.4069	0.0206	0.4275		1,730.8483	1,730.8483	0.0630		1,732.1721
Unmitigated	0.6099	1.4866	7.1414	0.0213	1.5248	0.0223	1.5472	0.4069	0.0206	0.4275		1,730.8483	1,730.8483	0.0630		1,732.1721

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse High Rise	204.82	211.19	168.07	685,071	685,071
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	204.82	211.19	168.07	685,071	685,071

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
Condo/Townhouse High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510011	0.056836	0.192178	0.151564	0.041643	0.005905	0.015642	0.015146	0.001440	0.002149	0.004721	0.000504	0.002262

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
NaturalGas Unmitigated	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593

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					
Condo/Townhouse High Rise	2124.47	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Enclosed Parking with Elevator	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		**0.0229**	**0.1958**	**0.0833**	**1.2500e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**		**249.9382**	**249.9382**	**4.7900e-003**	**4.5800e-003**	**251.4593**

5.2 Energy by Land Use - NaturalGas

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					
Enclosed Parking with Elevator	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
Condo/Townhouse High Rise	2.12447	0.0229	0.1958	0.0833	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9382	249.9382	4.7900e-003	4.5800e-003	251.4593
Total		**0.0229**	**0.1958**	**0.0833**	**1.2500e-003**		**0.0158**	**0.0158**		**0.0158**	**0.0158**		**249.9382**	**249.9382**	**4.7900e-003**	**4.5800e-003**	**251.4593**

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	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400
Unmitigated	15.3596	0.3732	28.7136	0.0394		3.7653	3.7653		3.7647	3.7647	458.9790	889.3066	1,348.2856	1.3761	0.0312	1,386.8400

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.8398	0.3258	24.6295	0.0392		3.7430	3.7430		3.7424	3.7424	458.9790	882.0000	1,340.9790	1.3688	0.0312	1,379.3802
Landscaping	0.1267	0.0474	4.0842	2.1000e-004		0.0223	0.0223		0.0223	0.0223		7.3066	7.3066	7.2900e-003		7.4597
Total	**15.3596**	**0.3731**	**28.7136**	**0.0394**		**3.7653**	**3.7653**		**3.7647**	**3.7647**	**458.9790**	**889.3066**	**1,348.2856**	**1.3761**	**0.0312**	**1,386.8400**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	12.8398	0.3258	24.6295	0.0392		3.7430	3.7430		3.7424	3.7424	458.9790	882.0000	1,340.9790	1.3688	0.0312	1,379.3802
Landscaping	0.1267	0.0474	4.0842	2.1000e-004		0.0223	0.0223		0.0223	0.0223		7.3066	7.3066	7.2900e-003		7.4597
Total	**15.3596**	**0.3731**	**28.7136**	**0.0394**		**3.7653**	**3.7653**		**3.7647**	**3.7647**	**458.9790**	**889.3066**	**1,348.2856**	**1.3761**	**0.0312**	**1,386.8400**

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

APPENDIX 3.2:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

2013
Area Designations for State Ambient Air Quality Standards
OZONE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

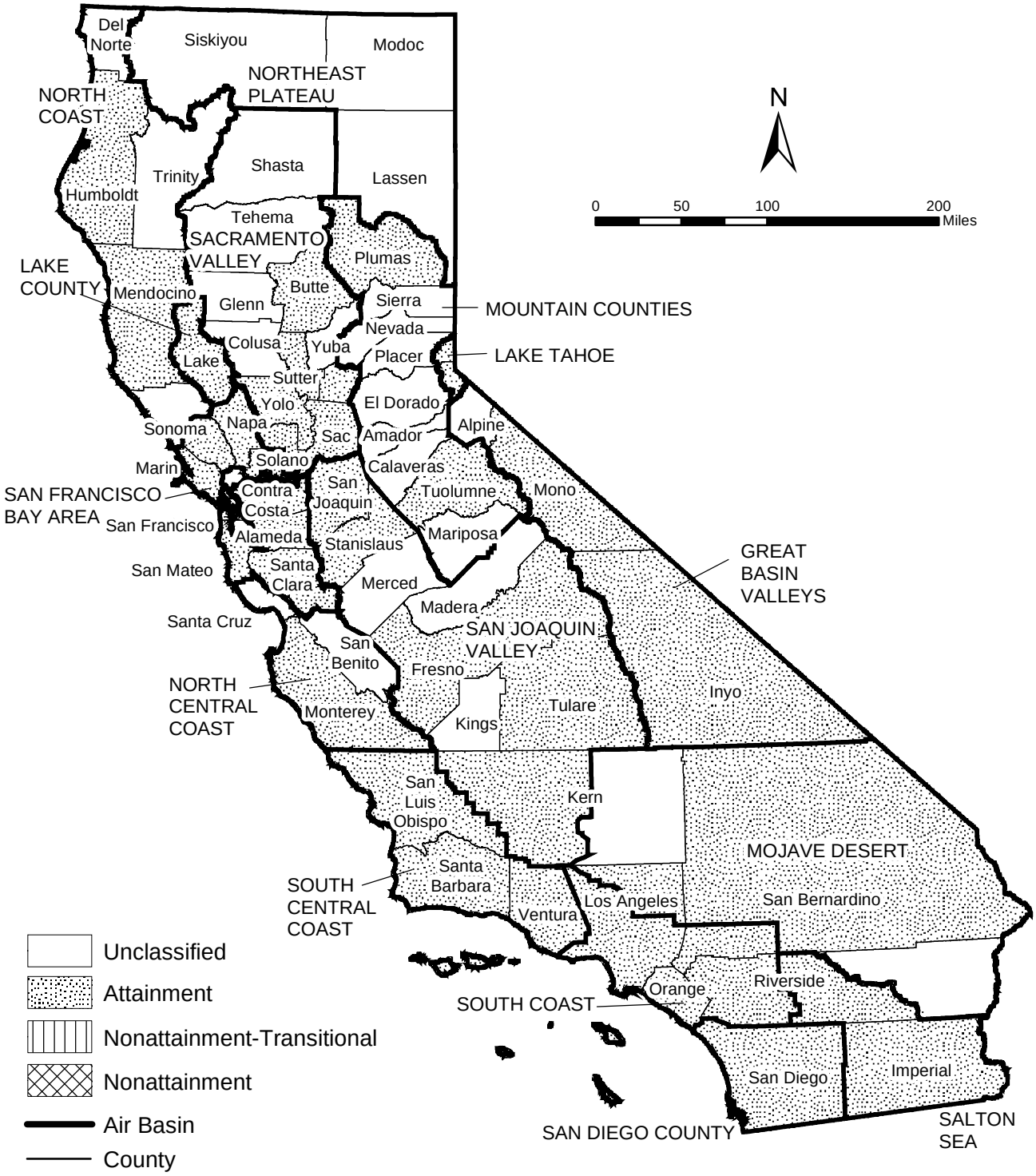
2013
Area Designations for State Ambient Air Quality Standards
PM10

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
PM2.5

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
CARBON MONOXIDE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
NITROGEN DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

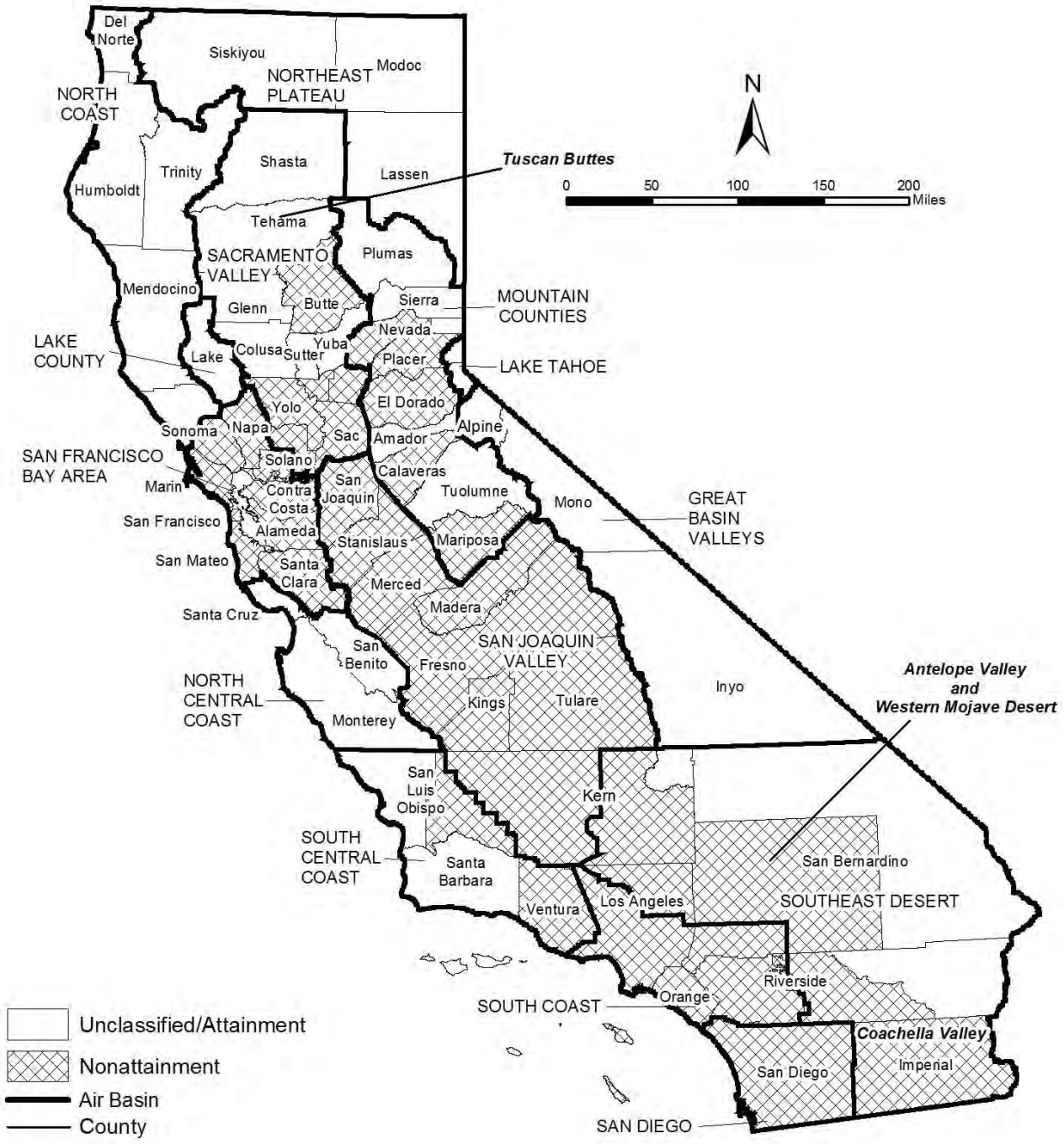
2013
Area Designations for State Ambient Air Quality Standards
SULFUR DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
LEAD

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards 8-HOUR OZONE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

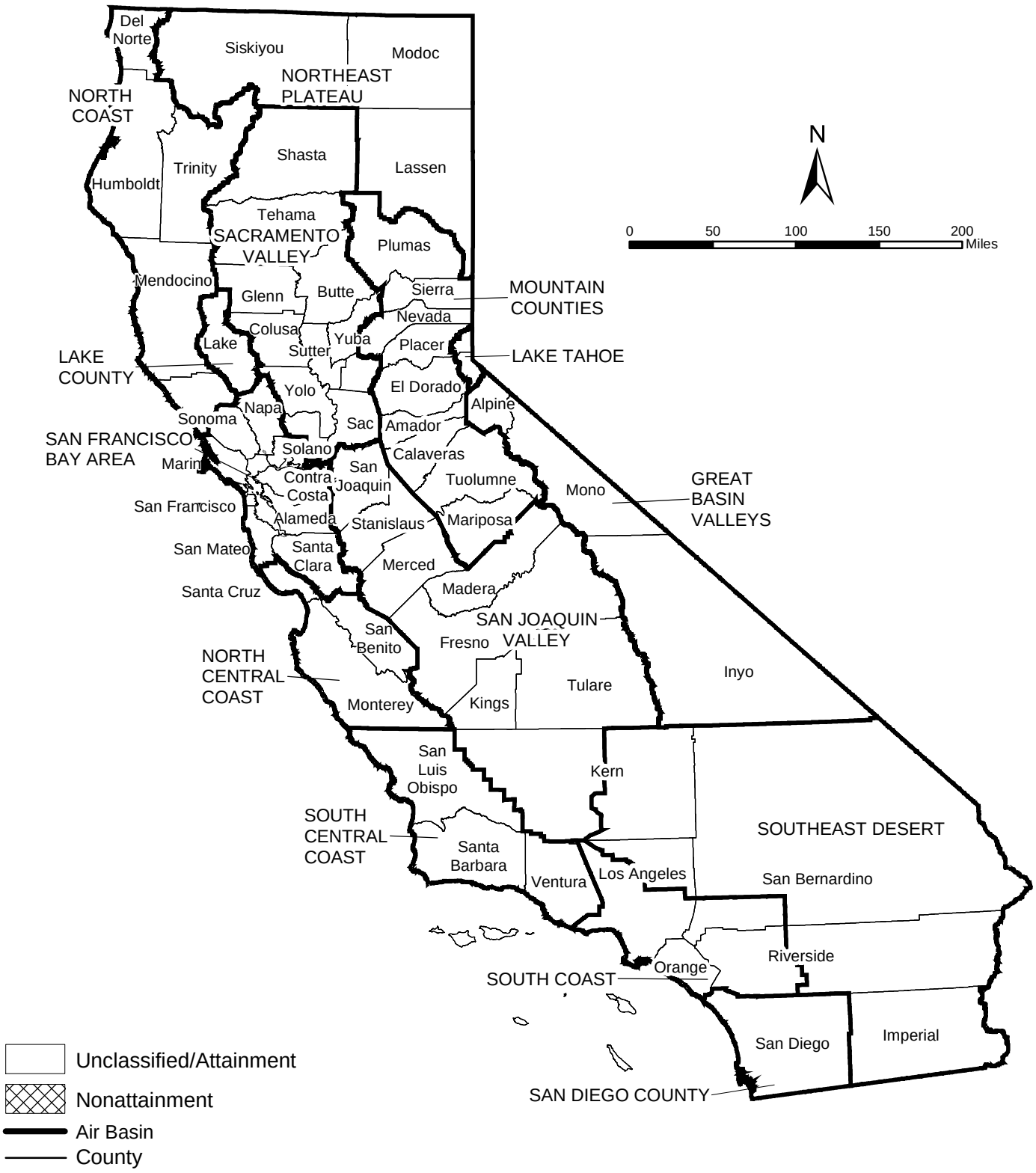
Area Designations for National Ambient Air Quality Standards PM10

Source Date:
September 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards PM2.5

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards CARBON MONOXIDE

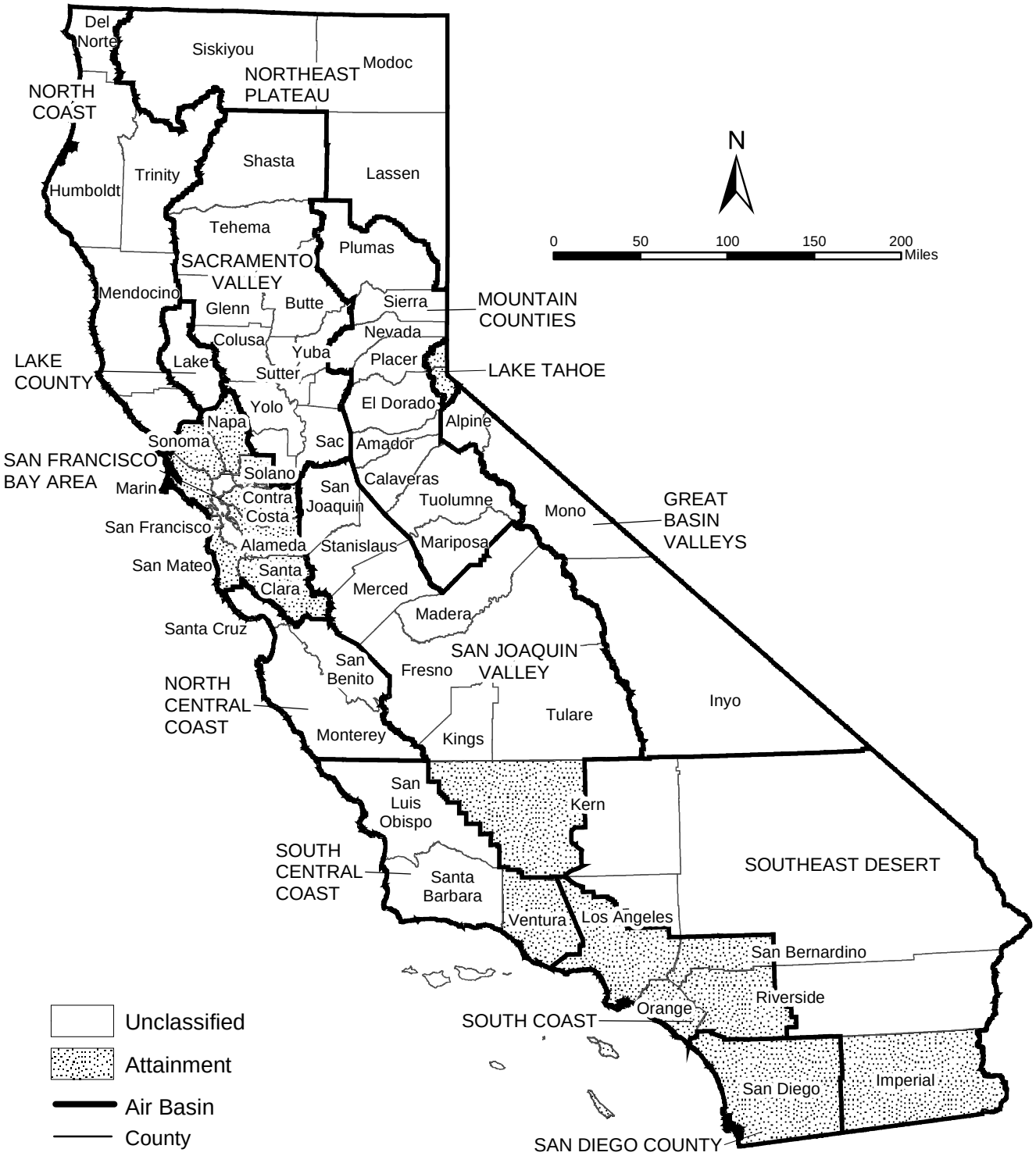


Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards NITROGEN DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards SULFUR DIOXIDE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards LEAD

Source Date:
June 2013
Air Quality Planning Branch, AQPSD