Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Climate/Meteorology

SOUTH COAST AIR BASIN

The project site lies within the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site is the Los Angeles Intl AP Monitoring Station (ID No. 045114). The average low is reported at 47.5°F in January, and the average high is 76.3°F in August (WRCC 2016).

In contrast to a very steady pattern of temperature, rainfall is a seasonally and annually highly variable. Almost all rainfall occurs from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. The historical rainfall average for the project area is 12.02 inches per year (WRCC 2016).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

Wind

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

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

Air Quality Regulations

The proposed project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (SCAQMD). However, SCAQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm[2]	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016a.

Notes: ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

[3] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

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

[5] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2015a). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2014a).

Volatile Organic Compounds (VOC) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone (O_3), SCAQMD has established a significance threshold for this pollutant (SCAQMD 2005).

Nitrogen Oxides (NO_x) are a byproduct of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (SCAQMD 2005; USEPA 2015a). The SoCAB is designated as an attainment area for NO_2 under the National AAQS California AAQS (CARB 2014a).

Sulfur Dioxide (SO_2) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and

refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2 (SCAQMD 2005; USEPA 2015a). When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS (CARB 2014a).

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (SCAQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (SCAQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; USEPA 2015a). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2014a).[4]

Ozone (O_3) is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2015a). The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2014a).

[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.
[2] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.
[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.
[4] CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM_{10} standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

Lead (Pb) concentrations decades ago exceeded the state and federal AAQS by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982 (SCAQMD 2005). However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources[5] recorded every localized violations of the new state and federal standards. As a result of these localized violations, the Los Angeles County portion of the SoCAB was designated in 2010 as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2014a). The project is not characteristic of industrial-type projects that have the potential to emit lead. Therefore, lead is not a pollutant of concern for the project.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

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

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

[5] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 identified that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools

- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

Multiple Airborne Toxics Exposure Study (MATES)

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk (SCAQMD 2008b).

SCAQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (SCAQMD 2015a).

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Air Quality Management Planning

SCAQMD is the agency responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2012 AQMP

On December 7, 2012 SCAQMD adopted the 2012 AQMP (Plan), which employs the most up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources. The Plan also addresses several state and federal

planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models. The Plan builds upon the approach identified in the 2007 AQMP for attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the urgent need to engage in interagency coordinated planning to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria air pollutant standards within the timeframes allowed under the Federal CAA. The Plan demonstrates attainment of federal 24-hour $PM_{2.5}$ standard by 2014 and the federal 8-hour ozone standard by 2023. Preliminary ambient air quality data suggests that meeting the 2016 federal 24-hour $PM_{2.5}$ standards by the end of 2014 is not likely, largely due to the usually extreme drought conditions in the SoCAB (SCAQMD 2015c). The Plan includes an update to the revised EPA 8-hour ozone control plan with new commitments for short-term NO_X and VOC reductions. In addition, it also identifies emerging issues of ultrafine ($PM_{1.0}$) particulate matter and near-roadway exposure, and an analysis of energy supply and demand.

2016 Draft AQMP

The SCAQMD is in the process of updating the AQMP. The draft 2016 AQMP is anticipated to be available in fall 2015. The 2016 AQMP will address strategies and measures to attain the 2008 federal 8-hour ozone standard by 2032 and the 2012 federal annual $PM_{2.5}$ standard by 2021. The 2016 AQMP will also take an initial look at the 2015 federal 8-hour ozone standard. It will also update previous attainment plans for ozone and $PM_{2.5}$ that have not yet been met (SCAQMD 2015d).

Lead State Implementation Plan

In 2008 EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to EPA for approval.

Area Designations

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*. The SoCAB is designated in attainment of the California AAQS for sulfates. The SoCAB is designated as nonattainment for lead (Los Angeles County only) under the National AAQS.

Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM_{10}	Serious Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2014a.

[1] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the SCAQMD. The project site is located within Source Receptor Area (SRA) 3 – Southwest Los Angeles County Coastal. The air quality monitoring station closest to the project site is the Los Angeles – Westchester Parkway Monitoring Station. This station monitors O_3, CO, NO_2, SO_2, and PM_{10}. Data for $PM_{2.5}$ is supplemented by the Los Angeles – North Main Street Monitoring Station. The most current five years of data monitored at these monitoring stations are included in Table 3, *Ambient Air Quality Monitoring Summary*. The data show recurring violations of the federal $PM_{2.5}$ standards and both the state and federal O_3 standards. The CO, SO_2, NO_2, and PM_{10} standards have not been violated in the last five years.

Table 3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations				
	2011	2012	2013	2014	2015
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	1	1	1	1
State 8-hour ≥ 0.07 ppm (days exceed threshold)	0	0	1	6	3
Federal 8-Hour > 0.075 ppm (days exceed threshold)	0	1	1	3	1
Max. 1-Hour Conc. (ppm)	0.078	0.106	0.105	0.114	0.096
Max. 8-Hour Conc. (ppm)	0.067	0.075	0.082	0.080	0.078
Carbon Monoxide (CO)[1]					
State 8-Hour > 9.0 ppm (days exceed threshold)	0	0	0	*	*
Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)	0	0	0	*	*
Max. 8-Hour Conc. (ppm)	1.79	1.73	*	*	*
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	97	77	77	87	87
Sulfur Dioxide (SO_2)[1]					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	0	0	0	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	0	0	0	*	*
Max 24-Hour Conc. (ppm)	0.002	0.002	0.002	*	*
Coarse Particulates (PM_{10})[1]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	0	0	0	0	0
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m^3)	41	31	38	46	31
Fine Particulates ($PM_{2.5}$)[2]					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	4	4	1	6	7
Max. 24-Hour Conc. (µg/m^3)	49.3	58.7	43.1	59.9	56.4

Source: CARB 2016b.
ppm: parts per million; parts per billion, µg/m^3: micrograms per cubic meter
Notes: * Data not available.
[1] Data obtained from the Los Angeles – Westchester Parkway Monitoring Station.
[2] Data obtained from the Los Angeles – North Main Street Monitoring Station.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2, distributed by the California Air Pollutant Control Officers Association (CAPCOA). CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, onroad emissions, and offroad emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The calculated emissions of the project are compared to thresholds of significance for individual projects using the SCAQMD's CEQA Air Quality Analysis Guidance Handbook.

Thresholds of Significance

The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website.[6] CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 4, *SCAQMD Significance Thresholds*, lists SCAQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, SCAQMD has not developed thresholds for them.

[6] SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found here: http://www.aqmd.gov/ceqa/hdbk.html.

Table 4 SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: SCAQMD 2015b.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (SCAQMD 2015e)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015f).

Mass emissions in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at

intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. Typically, for an intersection to exhibit a significant CO concentration, it would operate at level of service (LOS) E or worse without improvements (Caltrans 1997). However, at the time of the 1993 Handbook, the SoCAB was designated nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by SCAQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards. [7] As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a 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 (BAAQMD 2011).

LOCALIZED SIGNIFICANCE THRESHOLDS

SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 5, *SCAQMD Localized Significance Thresholds*.

Table 5 SCAQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (SCAQMD)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (SCAQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (SCAQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (SCAQMD)[1]	2.5 µg/m^3

Source: SCAQMD 2015b.
ppm – parts per million; µg/m^3 – micrograms per cubic meter
[1] Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, SCAQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

LST analysis for construction is applicable to all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. In accordance with SCAQMD's LST

[7] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

methodology, construction LSTs are based on the acreage disturbed per day based on equipment use. The construction LSTs for the project site in SRA 3 are shown in Table 6, *SCAQMD Screening-Level Construction Localized Significance Thresholds,* for receptors within 82 feet (25 meters).

Table 6 SCAQMD Construction Localized Significance Thresholds

	Threshold (lbs/day)[1]			
Acreage Disturbed	**Nitrogen Oxides (NO_X)**	**Carbon Monoxide (CO)**	**Coarse Particulates (PM_{10})**	**Fine Particulates ($PM_{2.5}$)**
≤1.00 Acre Disturbed Per Day	91	664	5.00	3.00

Source: SCAQMD 2008a & 2011, Based on receptors in SRA 3.
[1] LSTs are based on receptors within 82 feet (25 meters) for a project site size of 2.2 acres.

Because the project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern associated with the project. The operational LSTs in SRA 3 are shown in Table 7, *SCAQMD Screening-Level Operational Localized Significance Thresholds*.

Table 7 SCAQMD Screening-Level Operational Localized Significance Thresholds

	Threshold (lbs/day)
Air Pollutant	**Operational[1]**
Nitrogen Oxides (NO_X)	135
Carbon Monoxide (CO)	1,020
Coarse Particulates (PM_{10})	2.13
Fine Particulates ($PM_{2.5}$)	1.07

Source: SCAQMD 2008a, Based on receptors in SRA 3.
[1] LSTs are based on receptors within 82 feet (25 meters) for a project site size of 2.2 acres.

HEALTH RISK THRESHOLDS

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 8, *Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). CEQA does not require an EIR to analyze the environmental effects of attracting development and people to an area. However, the EIR must analyze the impacts of environmental hazards on future users, when the proposed Project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

Table 8 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases

Source: SCAQMD 2015b.

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,[8] carbon (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[9] The major GHG are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement).[10] Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

    - ***Chlorofluorocarbons (CFCs***) are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

[8] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop o rather than a primary cause of change.

[9] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2014b). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

[10] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

- ***Perfluorocarbons (PFCs)*** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.

- ***Sulfur Hexafluoride (SF_6)*** is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

- ***Hydrochlorofluorocarbons (HCFCs)*** contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.

- ***Hydrofluorocarbons (HFCs)*** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; USEPA 2015b).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 9, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2-equivalent (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Second Assessment Report GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 210 MT of CO_2.[11]

[11] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

Table 9 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298
Hydrofluorocarbons:				
HFC-23	264	270	11,700	14,800
HFC-32	5.6	4.9	650	675
HFC-125	32.6	29	2,800	3,500
HFC-134a	14.6	14	1,300	1,430
HFC-143a	48.3	52	3,800	4,470
HFC-152a	1.5	1.4	140	124
HFC-227ea	36.5	34.2	2,900	3,220
HFC-236fa	209	240	6,300	9,810
HFC-4310mee	17.1	15.9	1,300	1,030
Perfluoromethane: CF_4	50,000	50,000	6,500	7,390
Perfluoroethane: C_2F_6	10,000	10,000	9,200	12,200
Perfluorobutane: C_4F_{10}	2,600	NA	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	NA	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	NA	23,900	22,800

Source: IPCC 1995; IPCC 2007.

Notes: The IPCC has published updated global warming potential (GWP) values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2 (radiative forcing is the difference of energy from sunlight received by the earth and radiated back into space). However, GWP values identified in the Second Assessment Report are still used by SCAQMD to maintain consistency in GHG emissions modeling. In addition, the 2008 Scoping Plan was based on the GWP values in the Second Assessment Report.

[1] Based on 100-year time horizon of the GWP of the air pollutant relative to CO_2.

[2] The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

Regulatory Settings

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements, but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

The EPA's endangerment finding covers emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world (the first three are applicable to the proposed project).

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons (MT) or more of CO_2 per year are required to submit an annual report.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President's 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Executive Order B-30-15, Assembly Bill 32, and Senate Bill 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005. Executive Order S-03-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the State and requires state agencies to implement measures to meet the interim 2030 goal of Executive Order B-30-15 as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in State planning and investment decisions.

Assembly Bill 32

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Assembly Bill 32 (AB 32), the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. AB 32 directed CARB to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MT of CO_2e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state. The 2020 target requires a total emissions reduction of 169 $MMTCO_2e$, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e., 28.5 percent of 596 $MMTCO_2e$) (CARB 2008).[12]

Key elements of CARB's GHG reduction plan that may be applicable to the project include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards (adopted and cycle updates in progress).
- Achieving a mix of 33 percent for energy generation from renewable sources (anticipated by 2020).
- A California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system for large stationary sources (adopted 2011). The cap-and-trade program was expanded in 2013 to include the electricity sector, and then again in 2015 to include fuels (including natural gas and gasoline).
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted).
- Adopting and implementing measures pursuant to state laws and policies, including California's clean car standards (amendments to the Pavley Standards adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (LCFS) (adopted 2009).

[12] CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

- Creating target fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation (in progress).

Table 10, *Scoping Plan Greenhouse Gas Reduction Measures and Reductions Toward 2020 Target,* shows the proposed reductions from regulations and programs outlined in the 2008 Scoping Plan. In recognition of the critical role that local governments play in the successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of today's (2014) levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target.[13] Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer VMT (CARB 2008).

[13] The Scoping Plan references a goal for local governments to reduce community GHG emissions by 15 percent from current (interpreted as 2008) levels by 2020, but it does not rely on local GHG reduction targets established by local governments to meet the state's GHG reduction target of AB 32.

Table 10 Scoping Plan Greenhouse Gas Reduction Measures and Reductions Toward 2020 Target

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO_{2e}	Percentage of Statewide 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	**146.7**	**87%**
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	**27.3**	**16%**
Total Reductions Counted toward 2020 Target	**174**	**100%**
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations[2]	TBD[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	**42.8**	**NA**

Source: CARB 2008. Note: the percentages in the right-hand column add up to more than 100 percent because the emissions reduction goal is 169 $MMTCO_2e$ and the Scoping Plan identifies 174 $MMTCO_2e$ of emissions reductions strategies.

$MMTCO_{2e}$: million metric tons of CO_{2e}

[1] Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target. A discussion of the regional targets for the Southern California Region and local land use changes recommended within the Southern California Association of Government's (SCAG) Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) are included later in this section.

[2] To Be Determined. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO_{2e} (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 target.

2014 (First) Scoping Plan Update

CARB recently completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The final Update to the Scoping Plan was released in May, and CARB adopted it at the May 22, 2014, board hearing. The Update to the Scoping Plan defines CARB's climate change priorities for the next five years and lays the groundwork to reach post-2020 goals in Executive Orders S-03-05 and B-16-2012. The update includes the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants. The GHG target identified in the 2008 Scoping Plan is based on IPCC's GWPs identified in the Second and Third Assessment Reports (see Table 9). IPCC's Fourth and Fifth Assessment Reports identified more recent GWP values based on the latest available science. CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 $MMTCO_2e$ (CARB 2014b).

The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the Update to the Scoping Plan also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a mid-term target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with, or exceeds, the trajectory created by statewide goals (CARB 2014b).

According to the Update to the Scoping Plan, reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014b).

Second Scoping Plan Update

The new Executive Order B-30-15 requires CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. According to CARB, the Scoping Plan will be updated by late 2016 to address the new 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030 (CARB 2015).

SB 375 – Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS)

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). SB 375 requires CARB to periodically update the targets, no later than every 8 years. CARB plans to propose updated targets for consideration in 2016, with the intent to make them effective in 2018. Sustainable communities strategies (SCSs) adopted in 2018 would be subject to the updated targets (CARB 2015).

The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by

2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

CARB is currently in the process of updating the next round of targets and methodology to comply with the requirement for updates every eight years. Considerations for the next round of targets include whether to change the nature or magnitude of the emissions reduction targets for each of the MPOs, and whether the target-setting methodology should account for advances in technologies that reduce emissions. Such changes in methodology would permit cities to account for emissions reductions from advances in cleaner fuels and vehicles and not only from land use and transportation planning strategies.

SCAG's 2016 RTP/SCS

SB 375 requires the MPOs to prepare a sustainable communities strategy in their regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted in April 2016 (SCAG 2016). The SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement). The SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, provides incentives to governments and developers for consistency.

The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger vehicle per capita targets set in 2010 by CARB. Pursuant to the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions below 2005 levels by 8 percent by 2020, 18 percent by 2035, and 22 percent by 2040. Land use strategies to achieve the region's targets include planning for new growth around High Quality Transit Areas (HQTA), Livable Corridors, and creating Neighborhood Mobility Areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016).

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new low carbon fuel standard (LCFS) for transportation fuels sold within the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-

emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

Senate Bills 1078, 107, and 350 and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. CARB has now approved an even higher goal of 33 percent by 2020. In 2011, the state legislature adopted this higher standard in SBX1-2. Executive Order S-14-08 was signed in November 2008, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020. Senate Bill 350 (de Leon), signed into law September 2015, establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030.[14] Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

SENATE BILL 350

Senate Bill 350 (de Leon), was signed into law September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

California Building Standards Code – Building and Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2013 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 31, 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect July 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

Most recently, the CEC adopted the 2016 Building and Energy Efficiency Standards. The 2016 Standards will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. These standards will go into effect on January 1, 2017. Under the 2016 Standards, residential buildings are 28 percent more energy efficient than the 2013 Standards while non-residential buildings are 5 percent more energy efficient than the 2013 Standards (CEC 2015a).

The 2016 standards will not get us to zero net energy (ZNE). However, they do get us very close to the State's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve ZNE for newly constructed residential buildings throughout California (CEC 2015b).

California Green Building Standards Code – CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, CCR). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material

[14] SB 350 also sets a goal of increasing energy efficiency in existing buildings by 50 percent by 2030.

conservation, and internal air contaminants.[15] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011 and were updated most recently in 2013.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business-as-usual," they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327, California Public Resources Code Sections 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2013 California Green Building Standards Code (Title 24, California Code of Regulations, Part 11) also requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October of 2014 Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

[15] The green building standards became mandatory in the 2010 edition of the code.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the Energy Commission, in consultation with the department, to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[16]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) held in September 2010, SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD is proposing a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. This bright-line threshold is based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

[16] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

SCAQMD has identified an efficiency target for projects that exceed the screening threshold of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans) for year 2020.[17] The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[18]

For the purpose of this project, SCAQMD's project-level thresholds are used. If projects exceed the bright line and per capita efficiency targets, GHG emissions would be considered potentially significant in the absence of mitigation measures.

[17] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

[18] SCAQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

References

Bay Area Air Quality Management District (BAAQMD). 2011, Revised. California Environmental Quality Act Air Quality Guidelines.

California Air Pollution Control Officers Association (CAPCOA). 2013. California Emissions Estimator Model (CalEEMod). Version 2013.2.2. Prepared by: ENVIRON International Corporation and the California Air Districts.

California Air Resources Board (CARB). 1998, April 22. The Report on Diesel Exhaust. http://www.arb.ca.gov/toxics/dieseltac/de-fnds.htm.

———. 1999. California Air Resources Board (CARB). Final Staff Report: Update to the Toxic Air Contaminant List.

———. 2008, October. Climate Change Proposed Scoping Plan, a Framework for Change.

———. 2010, August. Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375.

———. 2012, Status of Scoping Plan Recommended Measures, http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

———. 2014a, August 22. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

———. 2014b, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

———. 2015, September 15. ARB Process and Schedule for SB 375 Target Update. http://www.arb.ca.gov/cc/sb375/sb375.htm.

———. 2016a, May 4. Ambient Air Quality Standards. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

———. 2016b, Air Pollution Data Monitoring Cards (2011, 2012, 2013, 2014 and 2015). Accessed April 20, 2016, http://www.arb.ca.gov/adam/topfour/topfour1.php.

California Department of Transportation (Caltrans). 1997, December. Transportation Project-Level Carbon Monoxide Protocol. UCD-ITS-RR-97-21. Prepared by Institute of Transportation Studies, University of California, Davis.

California Energy Commission (CEC). 2015a, June 10. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents.

———.2015b. 2016 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf.

California Public Utilities Commission (CPUC). California Renewables Portfolio Standard (RPS). Accessed February 2014. http://www.cpuc.ca.gov/PUC/energy/Renewables/.

Governor's Office of Planning and Research (OPR). 2008, June. Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through CEQA Review. http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf.

Intergovernmental Panel on Climate Change (IPCC). 1995. Second Assessment Report: Climate Change 1995.

———. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

———. 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press.

South Coast Air Quality Management District (SCAQMD). 1993. California Environmental Quality Act Air Quality Handbook.

———. 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. http://www.aqmd.gov/home/library/documents-support-material/planning-guidance/guidance-document.

———. 2008a, July. Final Localized Significance Threshold Methodology. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

———. 2008b, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iii.

———. 2010, September 28. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 15. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf.

———. 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf.

———. 2012, May 4. Final 2012 Lead State Implementation Plan: Los Angeles County. http://www3.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf.

———. 2013, February. Final 2012 Air Quality Management Plan. http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

———.2015a, October 3. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv.

———. 2015b, March (revised). SCAQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2.

———. 2015c, February 6. Supplement to 24-hour PM2.5 State Implementation Plan for South Coast Air Basin. http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-feb6-022.pdf?sfvrsn=2.

———. 2015d, August 28. 2016 Air Quality Management Plan Fact Sheet. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/factsheet-2016-aqmp.pdf?sfvrsn=2.

———. 2015e. Health Effects of Air Pollution. http://www.aqmd.gov/home/library/public-information/publications.

———. 2015f, October. “Blueprint for Clean Air: 2016 AQMP White Paper.” 2016 AQMP White Papers Web Page. http://www.aqmd.gov/home/about/groups-committees/aqmp-advisory-group/2016-aqmp-white-papers.

———. 2016. Updates to CEQA Air Quality Handbook. http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

Southern California Association of Governments (SCAG). 2016, April. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

US Environmental Protection Agency (USEPA). 2009, December. EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity. http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252.

———. 2013, December 5. The Green Book Nonattainment Areas for Criteria Air Pollutants. http://www.epa.gov/air/oaqps/greenbk/index.html.

———. 2015a. Six Common Air Pollutants. http://www3.epa.gov/airquality/urbanair/.

———. 2015b. Overview of Greenhouse Gases. http://www3.epa.gov/climatechange/ghgemissions/gases.html.

Western Regional Climate Center (WRCC). 2016. Western U.S. Historical Summaries – Los Angeles Intl AP Monitoring Station (Station ID No. 045114). Accessed April 4, 2016. http://www.wrcc.dri.edu/summary/Climsmsca.html.

Regional Construction Emissions Worksheet

Demolition		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Off-Road		1.5084	12.9878	12.449	0.0186	0.8594	0.8172
Total		**1.5084**	**12.9878**	**12.449**	**0.0186**	**0.8594**	**0.8172**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0318	0.3005	0.4516	8.70E-04	0.028	0.011
Worker		0.0373	0.051	0.5318	1.37E-03	0.104	0.0284
Total		**0.0691**	**0.3515**	**0.9834**	**2.24E-03**	**0.132**	**0.0394**
TOTAL		***1.5775***	***13.3393***	***13.4324***	***0.0208***	***0.9914***	***0.8566***

Asphalt/Concrete Demo Debris Haul		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Fugitive Dust						1.042	0.1578
Off-Road		0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**1.042**	**0.1578**
Offsite							
Hauling		0.4642	7.5941	5.0398	0.0233	0.6334	0.2518
Vendor		0	0	0	0	0	0
Worker		0	0	0	0	0	0
Total		**0.4642**	**7.5941**	**5.0398**	**0.0233**	**0.6334**	**0.2518**
TOTAL		***0.4642***	***7.5941***	***5.0398***	***0.0233***	***1.6754***	***0.4096***
2018 Demo + ACDDH		***2.0417***	***20.9334***	***18.4722***	***0.0441***	***2.6668***	***1.2662***

Building Demo Debris Haul		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Fugitive Dust						1.0841	0.1641
Off-Road		0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**1.0841**	**0.1641**
Offsite							
Hauling		0.4809	7.8668	5.2207	0.0242	0.6562	0.2608
Vendor		0	0	0	0	0	0
Worker		0	0	0	0	0	0
Total		**0.4809**	**7.8668**	**5.2207**	**0.0242**	**0.6562**	**0.2608**
TOTAL		***0.4809***	***7.8668***	***5.2207***	***0.0242***	***1.7403***	***0.4249***
2018 Demo + Demo Hauls		***2.5226***	***28.8002***	***23.6929***	***0.0683***	***4.4071***	***1.6911***

Grading		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Fugitive Dust						0	0
Off-Road		2.0607	20.0294	16.515	0.0228	1.3546	1.2462
Total		**2.0607**	**20.0294**	**16.515**	**0.0228**	**1.3546**	**1.2462**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0318	0.3005	0.4516	8.70E-04	0.028	0.011
Worker		0.0672	0.0918	0.9572	2.47E-03	0.1872	0.0511
Total		**0.0989**	**0.3923**	**1.4088**	**3.34E-03**	**0.2152**	**0.0621**
TOTAL		***2.1596***	***20.4217***	***17.9238***	***0.0261***	***1.5698***	***1.3083***

Grading Soil Haul

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Fugitive Dust						0.0234	3.55E-03
Off-Road		0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0.0234**	**3.55E-03**
Offsite							
Hauling		1.7756	29.0474	19.2771	0.0892	2.4229	0.963
Vendor		0	0	0	0	0	0
Worker		0	0	0	0	0	0
Total		**1.7756**	**29.0474**	**19.2771**	**0.0892**	**2.4229**	**0.963**
TOTAL		***1.7756***	***29.0474***	***19.2771***	***0.0892***	***2.4463***	***0.9666***
2018 Grading + Soil Haul		***3.9352***	***49.4691***	***37.2009***	***0.1153***	***4.0161***	***2.2749***

Building Construction

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Off-Road		2.6157	26.3171	17.7409	0.0333	1.5508	1.4489
Total		**2.6157**	**26.3171**	**17.7409**	**0.0333**	**1.5508**	**1.4489**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.389	3.6805	5.5321	1.07E-02	0.3425	0.1343
Worker		0.1045	0.1429	1.4889	3.84E-03	0.2912	0.0795
Total		**0.4935**	**3.8234**	**7.021**	**0.0145**	**0.6337**	**0.2139**
TOTAL		***3.1092***	***30.1405***	***24.7619***	***0.0478***	***2.1845***	***1.6628***

Building Interiors

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2018**						
Archit. Coating		4.5624				0	0
Off-Road		0.3982	2.6743	2.4723	3.96E-03	0.2007	0.2007
Total		**4.9606**	**2.6743**	**2.4723**	**3.96E-03**	**0.2007**	**0.2007**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0	0	0	0	0	0
Worker		0.0224	0.0306	0.3191	8.20E-04	0.0624	0.017
Total		**0.0224**	**0.0306**	**0.3191**	**8.20E-04**	**0.0624**	**0.017**
TOTAL		***4.9830***	***2.7049***	***2.7914***	***0.0048***	***0.2631***	***0.2177***
2018 BC + BI		***8.0922***	***32.8454***	***27.5533***	***0.0526***	***2.4476***	***1.8805***

Building Interiors

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
Archit. Coating		4.5624				0	0
Off-Road		0.3553	2.4472	2.4551	3.96E-03	0.1717	0.1717
Total		**4.9177**	**2.4472**	**2.4551**	**3.96E-03**	**0.1717**	**0.1717**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0	0	0	0	0	0
Worker		0.0206	0.0281	0.2921	8.20E-04	0.0624	0.017
Total		**0.0206**	**0.0281**	**0.2921**	**8.20E-04**	**0.0624**	**0.017**
TOTAL		***4.9383***	***2.4753***	***2.7472***	***0.0048***	***0.2341***	***0.1887***

Asphalt Paving & Off-Site Street Work							
			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Off-Road		0.9688	9.9201	9.3027	0.0134	0.6065	0.558
	Paving		0				0	0
	Total		**0.9688**	**9.9201**	**9.3027**	**0.0134**	**0.6065**	**0.558**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.1504	1.3853	2.1866	4.33E-03	0.1386	0.0538
	Worker		0.0343	0.0468	0.4869	1.36E-03	0.104	0.0284
	Total		**0.1847**	**1.432**	**2.6735**	**5.69E-03**	**0.2426**	**0.0822**
TOTAL			***1.1535***	***11.3521***	***11.9762***	***0.0191***	***0.8491***	***0.6402***
2019 BI + AP			***6.0918***	***13.8274***	***14.7234***	***0.0239***	***1.0832***	***0.8289***
MAX DAILY			**8.09**	**49.47**	**37.20**	**0.12**	**4.41**	**2.27**
Regional Thresholds			**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?			No	No	No	No	No	No

Localized Construction Emissions Worksheet

Demolition						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Off-Road		12.9878	12.449	0.8594	0.8172
	Total		**12.9878**	**12.449**	**0.8594**	**0.8172**
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Asphalt/Concrete Demo Debris Haul						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Fugitive Dust				1.042	0.1578
	Off-Road		0	0	0	0
	Total		**0**	**0**	**1.042**	**0.1578**
2018 Demo + ACDDH			***12.9878***	***12.4490***	***1.9014***	***0.9750***
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Building Demo Debris Haul						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Fugitive Dust				1.0841	0.1641
	Off-Road		0	0	0	0
	Total		**0**	**0**	**1.0841**	**0.1641**
2018 Demo + Demo Hauls			***12.9878***	***12.4490***	***2.9855***	***1.1391***
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Grading						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Fugitive Dust				0	0
	Off-Road		20.0294	16.515	1.3546	1.2462
	Total		**20.0294**	**16.515**	**1.3546**	**1.2462**

Grading Soil Haul						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Fugitive Dust				0.0234	3.55E-03
	Off-Road		0	0	0	0
	Total		**0**	**0**	**0.0234**	**3.55E-03**
2018 Grading + Soil Haul			***20.0294***	***16.5150***	***1.3780***	***1.2498***
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Building Construction						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Off-Road		26.3171	17.7409	1.5508	1.4489
	Total		**26.3171**	**17.7409**	**1.5508**	**1.4489**
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Building Interiors						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2018**				
	Archit. Coating				0	0
	Off-Road		2.6743	2.4723	0.2007	0.2007
	Total		**2.6743**	**2.4723**	**0.2007**	**0.2007**
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No
2018 BC + BI			***28.9914***	***20.2132***	***1.7515***	***1.6496***
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Building Interiors						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2019**				
	Archit. Coating				0	0
	Off-Road		2.4472	2.4551	0.1717	0.1717
	Total		**2.4472**	**2.4551**	**0.1717**	**0.1717**
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Asphalt Paving & Off-Site Street Work						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		**2019**				
	Off-Road		9.9201	9.3027	0.6065	0.558
	Paving				0	0
	Total		**9.9201**	**9.3027**	**0.6065**	**0.558**
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No
2019 BI + AP			***12.3673***	***11.7578***	***0.7782***	***0.7297***
LSTs			91	664	5.00	3.00
Exceed Thresholds?			No	No	No	No

Regional Operational Emissions Worksheet

Summer	**ROG**	**NOx**	**CO**	**SO2**	**PM10 Total**	**PM2.5 Total**
Area	1.449	0.001	0.057	0.000	0.000	0.000
Energy	0.012	0.107	0.090	0.001	0.008	0.008
Mobile	3.334	3.897	40.191	0.122	9.584	2.597
Total	**4.794**	**4.004**	**40.337**	**0.123**	**9.592**	**2.605**

Winter	**ROG**	**NOx**	**CO**	**SO2**	**PM10 Total**	**PM2.5 Total**
Area	1.449	0.001	0.057	0.000	0.000	0.000
Energy	0.012	0.107	0.090	0.001	0.008	0.008
Mobile	3.457	4.251	38.406	0.116	9.584	2.597
Total	**4.918**	**4.358**	**38.553**	**0.116**	**9.592**	**2.605**

Max Daily	**ROG**	**NOx**	**CO**	**SO2**	**PM10 Total**	**PM2.5 Total**
Area	1.449	0.001	0.057	0.000	0.000	0.000
Energy	0.012	0.107	0.090	0.001	0.008	0.008
Mobile	3.457	4.251	40.191	0.122	9.584	2.597
Total	**4.918**	**4.358**	**40.337**	**0.123**	**9.592**	**2.605**
Regional Thresholds	**55**	**55**	**550**	**150**	**150**	**550**
Exceeds Thresholds?	No	No	No	No	No	No

GHG Emissions Worksheet

	MTons Total
Total Construction	659

Source	MTons/Year	Percent of Total
Area	0	0%
Energy	133	11%
Mobile	1,046	83%
Waste	44	4%
Water	14	1%
Amortized Construction Emissions*	22	2%
Total All Sectors	1,259	100%

CalEEMod Project Characteristics Inputs

Project Address:	12870 & 12908 Panama Street, Los Angeles, CA 90066
Project Location:	Los Angeles-South Coast County
Climate Zone:	11
Land Use Setting:	Urban
Operational Year:	2019
Utility Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	3

Total Project Site Acreage:	2.2	acres	Student Capacity	532	Students
Acreage to be distrubed:	2.2	acres		75	Staff

Components

Classroom Buildings (K-8)	52,245	SQFT
Subterraean Parking Garage	13,900	SQFT
Total Play Fields & Landscaping	41,500	SQFT
Hardscape	43,560	SQFT

CalEEMod Land Use Inputs

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Square Feet
Classroom Buildings (K-8)	Educational	Elementary School	532	Students	0.20	52,245
Subterraean Parking Garage	Parking	Enclosed Parking with Elevator	13.90	1000sqft	0.05	13,900
Play Fields &Landscaping & Hardscape	Parking	Other Non-Asphalt Surfaces	1.95	acres	1.95	0
					2.20	

Building Demolition

Total building amount to be demolished:	10,120	CF		
	375	CY	474	tons

Construction Activity	Demolition Volume (CY)	Haul Truck Capacity (CY)*	Haul Distance (miles)**	Total Trip Ends	Total Days	Trip Ends/Day
Building Demo Debris Haul	375	10	35	75	4	20

**Provided by the Applicant.*

***Distance to landfill at Irwindale.*

Asphalt & Concrete Demolition

Total asphalt amount to be demolished:	10,620	CF	1,139	tons
	393	CY		
Total concrete amount to be demolished:	13,710	CF		
	508	CY		

Construction Activity	Demolition Volume (CY)	Haul Truck Capacity (CY)*	Haul Distance (miles)**	Total Trip Ends	Total Days	Trip Ends/Day
Asphalt/Concrete Demo Debris Haul	901	10	35	181	10	20

**Provided by the Applicant.*
***Distance to landfill at Irwindale.*

Soil Hauling

Total soil amount:	562,500	CF
	20,833	CY

Construction Activity	Export Volume (CY)	Haul Truck Capacity (CY)*	Haul Distance (miles)**	Total Trip Ends	Total Days	Trip Ends/Day
Grading Soil Haul	20,833	14	35	2,977	43	70

**Provided by the Applicant.*
***Distance to landfill at Irwindale.*

Architectural Coating

Non-Residential Architectural Coating

Percentage of Buildings' Interior Painted:	100%	
Percentage of Buildings' Exterior Painted:	100%	
SCAQMD Rule 1113		
Interior Paint VOC content:	100	grams per liter
Exterior Paint VOC content:	100	grams per liter

Nonresidential Structures	Land Use Square Feet	SCAQMD Factor	Total Paintable Surface Area[2]	Paintable Interior Area[1]	Paintable Exterior Area[1]
Classroom Buildings (K-8)	52,245	2	104,490	78,368	26,123
Subterraean Parking Garage	13,900	0.06	834		834
					26,957

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

[2] Applied CalEEMod Methodology in calculating total. The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. The default values based on SCAQMD methods used in their coating rules are 75% for the interior surfaces and 25% for the exterior shell

Construction - Unmitigated Run

SCAQMD Rule 403

Replace Ground Cover	PM10:	5	% Reduction
	PM25:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph

SCAQMD Rule 1186

Clean Paved Road	9	% PM Reduction

Trip Generation

Trip Generation*	1,320	Average Daily Trips (ADT)
Weekday Trip Rate*	2.48	trips/student
Saturday Trip Rate**	0.00	trips/student
Sunday Trip Rate**	0.00	trips/student

**Based on Traffic Impact Analysis for Ocean Charter School. Garland Associates, April 2016.*

***0 weekend trips for an Elementary School.*

Solid Waste

Solid Waste Generation Rate (Elementary School)*:	0.18	ton/student/year
Solid Waste Generation:	**97.09**	TPY

**CalEEMod Appendix D.*

Water Use

Septic Tank	0%	
Aerobic	100%	
Facultative Lagoons	0%	

Indoor Water Use Rate (Elementary School)*	2,424	gal/size/year
Indoor Water Use:	**1,289,695.68**	GPY

Outdoor Water Use Rate (Elementary School)*	6,234	gal/size/year
Outdoor Water Use:	**3,316,360.32**	GPY

**CalEEMod Appendix D.*

Energy Mitigation

2013 Building and Energy Efficiency Standards

Buildings constructed after January 1, 2014 are required to meet the 2013 Building and Energy Efficiency Standards. The 2013 Standards are 30% more energy efficient for non-residential buildings and 25% more energy efficient for residential buildings than the 2008 Building and Energy Efficiency Standards.

2016 Building and Energy Efficiency Standards

Buildings constructed after January 1, 2017 are required to meet the 2016 Building and Energy Efficiency Standards.

Non-Residential Exceed Title 24	5%	Improvement over 2013[1]
Non-Residential Exceed Title 24	33.5%	Improvement over 2008

Sources:

[1] California Energy Commission. 2015a. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/ June 10.

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

Modeling Adjustments for Operational Architectural Coating

Anticipated Exterior Area:	26,957	SQFT
Default Exterior Exterior Area:	33,073	SQFT
Difference:	82%	
Anticipated Exterior VOC:	100	grams per liter
Adjusted Exterior VOC:*	**82**	grams per liter
Anticipated Interior VOC:	100	grams per liter
Default Interior VOC:	250	grams per liter
Difference:	40%	
Interior Area:	78,368	SQFT
Adjusted Interior Area:	**31,347**	SQFT

**Adjustment made due to modeling software limitation.*

CalEEMod Construction Phase Inputs*

5-Day Work Week/8 hours per day

CalEEMod Default Construction Schedule

Phase Name	Phase Type	Start Date	End Date	CalEEMod Total Days
Demolition	Demolition	1/1/2018	2/28/2018	43
Asphalt/Concrete Demo Debris Haul	Demolition	2/15/2018	2/28/2018	10
Building Demo Debris Haul	Demolition	2/23/2018	2/28/2018	4
Grading	Grading	3/1/2018	4/30/2018	43
Grading Soil Haul	Grading	3/1/2018	4/30/2018	43
Building Construction	Building Construction	5/1/2018	11/30/2018	154
Building Interiors	Architectural Coating	11/1/2018	3/31/2019	107
Asphalt Paving and Off-Site Street Work	Paving	3/1/2019	4/30/2019	43

*Construction schedule provided by the District.

CalEEMod Construction Off-Road Equipment Inputs**

Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours/Day	HP	LF	Vendor Trips
Demolition						
Excavator w/ Breaker	Excavators	1	8	162	0.3819	
Loader	Tractors/Loaders/Backhoes	1	8	97	0.37	
Bobcat/Skip	Tractors/Loaders/Backhoes	1	8	97	0.37	
Crushing/Proc. Equipment	Crushing/Proc. Equipment	1	8	85	0.78	
Water Truck*						4
Grading						
Excavator	Excavators	1	8	162	0.3819	
Compactor	Rollers	1	8	80	0.38	
Loader	Tractors/Loaders/Backhoes	1	8	97	0.37	
Skip Loader	Tractors/Loaders/Backhoes	1	8	97	0.37	
Vibratory Roller	Rollers	2	8	80	0.38	
Trencher	Trencher	1	8	80	0.5025	
Water Truck*						4
Building Construction						
Bore/Drill Rigs	Bore/Drill Rigs	1	8	205	0.5025	
Concrete Pumps	Pumps	1	8	84	0.74	
Crane	Cranes	1	8	226	0.2881	
Forklifts/Gradalls	Forklifts	4	8	89	0.201	
Backhoes	Tractors/Loaders/Backhoes	2	8	97	0.37	
Concrete&Delivery Truck*						34
Water Truck*						4+11(default)
Building Interior						
Air Compressors	Air Compressors	1	8	78	0.48	
Asphalt Paving and Off-site Street Work						
Skip Loaders	Tractors/Loaders/Backhoes	2	8	97	0.37	
Roller	Rollers	1	8	80	0.38	
Paver	Pavers	1	8	125	0.4154	
Asphalt Truck*						16
Water Truck*						4

*Emissions accounted for in the vendor trips assigned.
**Based on construction information approved by the District.

Fleet mix for the school project is modified to reflect a higher proportion of passenger vehicles than the regional VMT. The primary vehicle trips are passenger vehicles from parents dropping off students and staff trips. Assumes a mix of approximately 97% passenger vehicles, 2% medium duty trucks, and 1% heavy duty trucks and buses.

Changes to the CalEEMod Defaults - Fleet Mix 2019

Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix	0.530902	0.057841	0.178699	0.12479	0.039063	0.006298	0.016951	0.033908	0.002496	0.003149	0.003689	0.000536	0.001678	100%
Percent	77.11%			12.48%				10.41%						100.00%
Proportion	0.688472	0.075008	0.231736	1.000000	0.375321	0.060512	0.162867	0.325791	0.023982	0.030256	0.004784	0.005150	0.016122	
Assumed Mix	97.00%			2.00%				1.00%						100.00%
adjusted with														
Assumed	0.667818	0.072758	0.224784	0.020000	0.003753	0.000605	0.001629	0.003258	0.000240	0.000303	0.004640	0.000051	0.000161	100%
Percent	97.00%			2.00%				1.00%						100.00%
Calibrated for														
School	0.667818	0.072758	0.224784	0.020000	0.003753	0.000605	0.001629	0.003258	0	0	0.004640	0.000051	0	99.9%
Percent	97.00%			2.00%				0.93%						99.93%
Modified	**0.667818**	**0.072758**	**0.224784**	**0.020000**	**0.004037**	**0.000651**	**0.001752**	**0.003504**	**0.000000**	**0.000000**	**0.004640**	**0.000055**	**0.000000**	**100.0%**
	97.00%			2.00%				1.00%						
Trips	882	96	297	26	5	1	2	5	0	0	6	0	0	

Ocean Charter School

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	532.00	Student	0.20	52,245.00	0
Enclosed Parking with Elevator	13.90	1000sqft	0.05	13,900.00	0
Other Non-Asphalt Surfaces	1.95	Acre	1.95	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

Ocean Charter School

Los Angeles-South Coast County, Winter

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0 Land Use Square Feet to exclude striping

Construction Phase - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Trips and VMT - Based on construction information provided by the Applicant.

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Based on Traffic Impact Analysis for Ocean Charter School. Garland Associates, April 2016.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Area Coating - Adjustment made due to modeling software limitation.

Water And Wastewater - 100% aerobic.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 & 1186

Energy Mitigation -

Water Mitigation -

Ocean Charter School

Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	33,073.00	26,957.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	99,218.00	78,368.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	82
tblAreaCoating	Area_Nonresidential_Interior	99218	31347
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	82	250
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstructionPhase	NumDays	10.00	107.00
tblConstructionPhase	NumDays	220.00	154.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	PhaseEndDate	4/30/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	3/14/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	3/6/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	6/28/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	5/29/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	12/1/2018	11/1/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/23/2018
tblConstructionPhase	PhaseStartDate	5/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	4/1/2019	3/1/2019

tblGrading	MaterialExported	0.00	20,833.00
tblLandUse	LandUseSquareFeet	44,476.99	52,245.00
tblLandUse	LandUseSquareFeet	84,942.00	0.00
tblLandUse	LotAcreage	1.02	0.20
tblLandUse	LotAcreage	0.32	0.05
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripNumber	113.00	181.00
tblTripsAndVMT	HaulingTripNumber	47.00	75.00
tblTripsAndVMT	HaulingTripNumber	2,604.00	2,977.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	11.00	49.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00

tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00

tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleTrips	WD_TR	1.29	2.48
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

Ocean Charter School

Los Angeles-South Coast County, Winter

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					
2018	8.0922	49.4690	37.2008	0.1153	6.2327	1.8185	7.3412	1.0971	1.7050	2.3193	0.0000	11,291.8127	11,291.8127	0.9473	0.0000	11,311.7068
2019	6.0918	13.8273	14.7234	0.0238	0.3037	0.8018	1.1054	0.0830	0.7514	0.8343	0.0000	2,276.9743	2,276.9743	0.4618	0.0000	2,286.6723
Total	**14.1840**	**63.2964**	**51.9242**	**0.1392**	**6.5364**	**2.6203**	**8.4467**	**1.1801**	**2.4563**	**3.1537**	**0.0000**	**13,568.7870**	**13,568.7870**	**1.4092**	**0.0000**	**13,598.3791**

Ocean Charter School

Los Angeles-South Coast County, Winter

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					
2018	8.0922	49.4690	37.2008	0.1153	3.2985	1.8185	4.4070	0.6447	1.7050	2.2749	0.0000	11,291.8127	11,291.8127	0.9473	0.0000	11,311.7068
2019	6.0918	13.8273	14.7234	0.0238	0.2815	0.8018	1.0832	0.0775	0.7514	0.8289	0.0000	2,276.9743	2,276.9743	0.4618	0.0000	2,286.6723
Total	**14.1840**	**63.2964**	**51.9242**	**0.1392**	**3.5799**	**2.6203**	**5.4902**	**0.7222**	**2.4563**	**3.1038**	**0.0000**	**13,568.7870**	**13,568.7870**	**1.4092**	**0.0000**	**13,598.3791**

	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**	**45.23**	**0.00**	**35.00**	**38.80**	**0.00**	**1.58**	**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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Energy	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998
Mobile	3.4569	4.2511	38.4064	0.1155	9.5009	0.0831	9.5840	2.5198	0.0769	2.5968		8,730.3001	8,730.3001	0.3952		8,738.5995
Total	**4.9227**	**4.4045**	**38.5913**	**0.1164**	**9.5009**	**0.0949**	**9.5958**	**2.5198**	**0.0887**	**2.6086**		**8,913.8037**	**8,913.8037**	**0.3990**	**3.3600e-003**	**8,923.2260**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Energy	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
Mobile	3.4569	4.2511	38.4064	0.1155	9.5009	0.0831	9.5840	2.5198	0.0769	2.5968		8,730.3001	8,730.3001	0.3952		8,738.5995
Total	**4.9176**	**4.3583**	**38.5525**	**0.1161**	**9.5009**	**0.0914**	**9.5923**	**2.5198**	**0.0852**	**2.6051**		**8,858.4627**	**8,858.4627**	**0.3980**	**2.3500e-003**	**8,867.5482**

	ROG	NOx	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	**0.10**	**1.05**	**0.10**	**0.24**	**0.00**	**3.69**	**0.04**	**0.00**	**3.94**	**0.13**	**0.00**	**0.62**	**0.62**	**0.27**	**30.06**	**0.62**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	1/1/2018	2/28/2018	5	43	
2	Asphalt/Concrete Demo Debris Haul	Demolition	2/15/2018	2/28/2018	5	10	
3	Building Demo Debris Haul	Demolition	2/23/2018	2/28/2018	5	4	
4	Grading	Grading	3/1/2018	4/30/2018	5	43	
5	Grading Soil Haul	Grading	3/1/2018	4/30/2018	5	43	
6	Building Construction	Building Construction	5/1/2018	11/30/2018	5	154	
7	Building Interiors	Architectural Coating	11/1/2018	3/31/2019	5	107	
8	Asphalt Paving & Off-Site Street Work	Paving	3/1/2019	4/30/2019	5	43	

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: 78,368; Non-Residential Outdoor: 26,957 (Architectural Coating –

Ocean Charter School

Los Angeles-South Coast County, Winter

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Asphalt/Concrete Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt/Concrete Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Asphalt/Concrete Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Building Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rollers	3	8.00	80	0.38
Grading	Trenchers	1	8.00	80	0.50
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	205	0.50
Grading Soil Haul	Graders	0	8.00	174	0.41
Grading Soil Haul	Rubber Tired Dozers	0	8.00	255	0.40
Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Interiors	Air Compressors	1	8.00	78	0.48
Asphalt Paving & Off-Site Street Work	Cement and Mortar Mixers	0	8.00	9	0.56
Asphalt Paving & Off-Site Street Work	Pavers	1	8.00	125	0.42
Asphalt Paving & Off-Site Street Work	Paving Equipment	0	8.00	130	0.36
Asphalt Paving & Off-Site Street Work	Rollers	1	8.00	80	0.38
Asphalt Paving & Off-Site Street Work	Tractors/Loaders/Backhoes	2	8.00	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	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt/Concrete Demo Debris Haul	0	0.00	0.00	181.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Demo Debris Haul	0	0.00	0.00	75.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Soil Haul	0	0.00	0.00	2,977.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	28.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Interiors	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving & Off-Site Street Work	4	10.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Ocean Charter School

Los Angeles-South Coast County, Winter

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5084	12.9878	12.4490	0.0186		0.8594	0.8594		0.8172	0.8172		1,825.4848	1,825.4848	0.4222		1,834.3516
Total	**1.5084**	**12.9878**	**12.4490**	**0.0186**		**0.8594**	**0.8594**		**0.8172**	**0.8172**		**1,825.4848**	**1,825.4848**	**0.4222**		**1,834.3516**

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	0.0318	0.3005	0.4516	8.7000e-004	0.0250	4.6400e-003	0.0296	7.1000e-003	4.2700e-003	0.0114		84.5392	84.5392	6.4000e-004		84.5526
Worker	0.0373	0.0510	0.5318	1.3700e-003	0.1118	9.8000e-004	0.1128	0.0296	9.1000e-004	0.0306		107.5592	107.5592	5.7400e-003		107.6798
Total	**0.0691**	**0.3515**	**0.9834**	**2.2400e-003**	**0.1367**	**5.6200e-003**	**0.1424**	**0.0367**	**5.1800e-003**	**0.0419**		**192.0983**	**192.0983**	**6.3800e-003**		**192.2324**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	1.5084	12.9878	12.4490	0.0186		0.8594	0.8594		0.8172	0.8172	0.0000	1,825.4848	1,825.4848	0.4222		1,834.3516
Total	**1.5084**	**12.9878**	**12.4490**	**0.0186**		**0.8594**	**0.8594**		**0.8172**	**0.8172**	**0.0000**	**1,825.4848**	**1,825.4848**	**0.4222**		**1,834.3516**

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	0.0318	0.3005	0.4516	8.7000e-004	0.0233	4.6400e-003	0.0280	6.7000e-003	4.2700e-003	0.0110		84.5392	84.5392	6.4000e-004		84.5526
Worker	0.0373	0.0510	0.5318	1.3700e-003	0.1030	9.8000e-004	0.1040	0.0275	9.1000e-004	0.0284		107.5592	107.5592	5.7400e-003		107.6798
Total	**0.0691**	**0.3515**	**0.9834**	**2.2400e-003**	**0.1264**	**5.6200e-003**	**0.1320**	**0.0342**	**5.1800e-003**	**0.0394**		**192.0983**	**192.0983**	**6.3800e-003**		**192.2324**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.3 Asphalt/Concrete Demo Debris Haul - 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					
Fugitive Dust					2.4374	0.0000	2.4374	0.3690	0.0000	0.3690			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4374**	**0.0000**	**2.4374**	**0.3690**	**0.0000**	**0.3690**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4642	7.5941	5.0398	0.0233	0.5515	0.1196	0.6711	0.1510	0.1100	0.2610		2,279.9842	2,279.9842	0.0169		2,280.3396
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	0.0000	0.0000	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	**0.4642**	**7.5941**	**5.0398**	**0.0233**	**0.5515**	**0.1196**	**0.6711**	**0.1510**	**0.1100**	**0.2610**		**2,279.9842**	**2,279.9842**	**0.0169**		**2,280.3396**

Ocean Charter School

Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0420	0.0000	1.0420	0.1578	0.0000	0.1578			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0420**	**0.0000**	**1.0420**	**0.1578**	**0.0000**	**0.1578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4642	7.5941	5.0398	0.0233	0.5138	0.1196	0.6334	0.1417	0.1100	0.2518		2,279.9842	2,279.9842	0.0169		2,280.3396
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	0.0000	0.0000	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	**0.4642**	**7.5941**	**5.0398**	**0.0233**	**0.5138**	**0.1196**	**0.6334**	**0.1417**	**0.1100**	**0.2518**		**2,279.9842**	**2,279.9842**	**0.0169**		**2,280.3396**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.4 Building Demo Debris Haul - 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					
Fugitive Dust					2.5358	0.0000	2.5358	0.3839	0.0000	0.3839			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5358**	**0.0000**	**2.5358**	**0.3839**	**0.0000**	**0.3839**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4809	7.8668	5.2207	0.0242	0.5713	0.1239	0.6952	0.1564	0.1140	0.2704		2,361.8620	2,361.8620	0.0175		2,362.2302
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	0.0000	0.0000	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	**0.4809**	**7.8668**	**5.2207**	**0.0242**	**0.5713**	**0.1239**	**0.6952**	**0.1564**	**0.1140**	**0.2704**		**2,361.8620**	**2,361.8620**	**0.0175**		**2,362.2302**

Ocean Charter School

Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0841	0.0000	1.0841	0.1641	0.0000	0.1641			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0841**	**0.0000**	**1.0841**	**0.1641**	**0.0000**	**0.1641**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4809	7.8668	5.2207	0.0242	0.5323	0.1239	0.6562	0.1468	0.1140	0.2608		2,361.8620	2,361.8620	0.0175		2,362.2302
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	0.0000	0.0000	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	**0.4809**	**7.8668**	**5.2207**	**0.0242**	**0.5323**	**0.1239**	**0.6562**	**0.1468**	**0.1140**	**0.2608**		**2,361.8620**	**2,361.8620**	**0.0175**		**2,362.2302**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.5 Grading - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0607	20.0294	16.5150	0.0228		1.3546	1.3546		1.2462	1.2462		2,292.7204	2,292.7204	0.7138		2,307.7092
Total	**2.0607**	**20.0294**	**16.5150**	**0.0228**	**0.0000**	**1.3546**	**1.3546**	**0.0000**	**1.2462**	**1.2462**		**2,292.7204**	**2,292.7204**	**0.7138**		**2,307.7092**

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	0.0318	0.3005	0.4516	8.7000e-004	0.0250	4.6400e-003	0.0296	7.1000e-003	4.2700e-003	0.0114		84.5392	84.5392	6.4000e-004		84.5526
Worker	0.0672	0.0918	0.9572	2.4700e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6300e-003	0.0550		193.6065	193.6065	0.0103		193.8236
Total	**0.0989**	**0.3923**	**1.4088**	**3.3400e-003**	**0.2262**	**6.4100e-003**	**0.2326**	**0.0605**	**5.9000e-003**	**0.0664**		**278.1457**	**278.1457**	**0.0110**		**278.3762**

Ocean Charter School

Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0607	20.0294	16.5150	0.0228		1.3546	1.3546		1.2462	1.2462	0.0000	2,292.7204	2,292.7204	0.7138		2,307.7092
Total	**2.0607**	**20.0294**	**16.5150**	**0.0228**	**0.0000**	**1.3546**	**1.3546**	**0.0000**	**1.2462**	**1.2462**	**0.0000**	**2,292.7204**	**2,292.7204**	**0.7138**		**2,307.7092**

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	0.0318	0.3005	0.4516	8.7000e-004	0.0233	4.6400e-003	0.0280	6.7000e-003	4.2700e-003	0.0110		84.5392	84.5392	6.4000e-004		84.5526
Worker	0.0672	0.0918	0.9572	2.4700e-003	0.1855	1.7700e-003	0.1872	0.0495	1.6300e-003	0.0511		193.6065	193.6065	0.0103		193.8236
Total	**0.0989**	**0.3923**	**1.4088**	**3.3400e-003**	**0.2088**	**6.4100e-003**	**0.2152**	**0.0562**	**5.9000e-003**	**0.0621**		**278.1457**	**278.1457**	**0.0110**		**278.3762**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.6 Grading Soil Haul - 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					
Fugitive Dust					0.0548	0.0000	0.0548	8.3000e-003	0.0000	8.3000e-003			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0548**	**0.0000**	**0.0548**	**8.3000e-003**	**0.0000**	**8.3000e-003**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7756	29.0474	19.2771	0.0892	2.1096	0.4575	2.5670	0.5776	0.4209	0.9984		8,720.9467	8,720.9467	0.0647		8,722.3061
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	0.0000	0.0000	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	**1.7756**	**29.0474**	**19.2771**	**0.0892**	**2.1096**	**0.4575**	**2.5670**	**0.5776**	**0.4209**	**0.9984**		**8,720.9467**	**8,720.9467**	**0.0647**		**8,722.3061**

Ocean Charter School

Los Angeles-South Coast County, Winter

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					0.0234	0.0000	0.0234	3.5500e-003	0.0000	3.5500e-003			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0234**	**0.0000**	**0.0234**	**3.5500e-003**	**0.0000**	**3.5500e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7756	29.0474	19.2771	0.0892	1.9654	0.4575	2.4229	0.5422	0.4209	0.9630		8,720.9467	8,720.9467	0.0647		8,722.3061
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	0.0000	0.0000	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	**1.7756**	**29.0474**	**19.2771**	**0.0892**	**1.9654**	**0.4575**	**2.4229**	**0.5422**	**0.4209**	**0.9630**		**8,720.9467**	**8,720.9467**	**0.0647**		**8,722.3061**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6157	26.3171	17.7409	0.0333		1.5508	1.5508		1.4489	1.4489		3,312.1315	3,312.1315	0.8843		3,330.7017
Total	**2.6157**	**26.3171**	**17.7409**	**0.0333**		**1.5508**	**1.5508**		**1.4489**	**1.4489**		**3,312.1315**	**3,312.1315**	**0.8843**		**3,330.7017**

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	0.3890	3.6805	5.5321	0.0107	0.3058	0.0568	0.3626	0.0870	0.0523	0.1393		1,035.6046	1,035.6046	7.8600e-003		1,035.7696
Worker	0.1045	0.1429	1.4889	3.8400e-003	0.3130	2.7500e-003	0.3157	0.0830	2.5400e-003	0.0855		301.1657	301.1657	0.0161		301.5034
Total	**0.4935**	**3.8234**	**7.0210**	**0.0145**	**0.6187**	**0.0596**	**0.6783**	**0.1700**	**0.0548**	**0.2248**		**1,336.7703**	**1,336.7703**	**0.0239**		**1,337.2730**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	2.6157	26.3171	17.7409	0.0333		1.5508	1.5508		1.4489	1.4489	0.0000	3,312.1315	3,312.1315	0.8843		3,330.7017
Total	**2.6157**	**26.3171**	**17.7409**	**0.0333**		**1.5508**	**1.5508**		**1.4489**	**1.4489**	**0.0000**	**3,312.1315**	**3,312.1315**	**0.8843**		**3,330.7017**

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	0.3890	3.6805	5.5321	0.0107	0.2856	0.0568	0.3425	0.0821	0.0523	0.1343		1,035.6046	1,035.6046	7.8600e-003		1,035.7696
Worker	0.1045	0.1429	1.4889	3.8400e-003	0.2885	2.7500e-003	0.2912	0.0770	2.5400e-003	0.0795		301.1657	301.1657	0.0161		301.5034
Total	**0.4935**	**3.8234**	**7.0210**	**0.0145**	**0.5741**	**0.0596**	**0.6337**	**0.1591**	**0.0548**	**0.2139**		**1,336.7703**	**1,336.7703**	**0.0239**		**1,337.2730**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.8 Building Interiors - 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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135
Total	**4.9606**	**2.6743**	**2.4723**	**3.9600e-003**		**0.2007**	**0.2007**		**0.2007**	**0.2007**		**375.2647**	**375.2647**	**0.0357**		**376.0135**

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	0.0224	0.0306	0.3191	8.2000e-004	0.0671	5.9000e-004	0.0677	0.0178	5.4000e-004	0.0183		64.5355	64.5355	3.4500e-003		64.6079
Total	**0.0224**	**0.0306**	**0.3191**	**8.2000e-004**	**0.0671**	**5.9000e-004**	**0.0677**	**0.0178**	**5.4000e-004**	**0.0183**		**64.5355**	**64.5355**	**3.4500e-003**		**64.6079**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135
Total	**4.9606**	**2.6743**	**2.4723**	**3.9600e-003**		**0.2007**	**0.2007**		**0.2007**	**0.2007**	**0.0000**	**375.2647**	**375.2647**	**0.0357**		**376.0135**

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	0.0224	0.0306	0.3191	8.2000e-004	0.0618	5.9000e-004	0.0624	0.0165	5.4000e-004	0.0170		64.5355	64.5355	3.4500e-003		64.6079
Total	**0.0224**	**0.0306**	**0.3191**	**8.2000e-004**	**0.0618**	**5.9000e-004**	**0.0624**	**0.0165**	**5.4000e-004**	**0.0170**		**64.5355**	**64.5355**	**3.4500e-003**		**64.6079**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.8 Building Interiors - 2019

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717		375.2641	375.2641	0.0317		375.9297
Total	**4.9177**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**		**375.2641**	**375.2641**	**0.0317**		**375.9297**

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	0.0206	0.0281	0.2921	8.2000e-004	0.0671	5.7000e-004	0.0676	0.0178	5.3000e-004	0.0183		62.0029	62.0029	3.2200e-003		62.0706
Total	**0.0206**	**0.0281**	**0.2921**	**8.2000e-004**	**0.0671**	**5.7000e-004**	**0.0676**	**0.0178**	**5.3000e-004**	**0.0183**		**62.0029**	**62.0029**	**3.2200e-003**		**62.0706**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717	0.0000	375.2641	375.2641	0.0317		375.9297
Total	**4.9177**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**	**0.0000**	**375.2641**	**375.2641**	**0.0317**		**375.9297**

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	0.0206	0.0281	0.2921	8.2000e-004	0.0618	5.7000e-004	0.0624	0.0165	5.3000e-004	0.0170		62.0029	62.0029	3.2200e-003		62.0706
Total	**0.0206**	**0.0281**	**0.2921**	**8.2000e-004**	**0.0618**	**5.7000e-004**	**0.0624**	**0.0165**	**5.3000e-004**	**0.0170**		**62.0029**	**62.0029**	**3.2200e-003**		**62.0706**

Ocean Charter School

Los Angeles-South Coast County, Winter

3.9 Asphalt Paving & Off-Site Street Work - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9688	9.9201	9.3027	0.0134		0.6065	0.6065		0.5580	0.5580		1,322.3619	1,322.3619	0.4184		1,331.1479
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9688**	**9.9201**	**9.3027**	**0.0134**		**0.6065**	**0.6065**		**0.5580**	**0.5580**		**1,322.3619**	**1,322.3619**	**0.4184**		**1,331.1479**

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	0.1504	1.3853	2.1866	4.3300e-003	0.1248	0.0220	0.1469	0.0355	0.0203	0.0558		414.0073	414.0073	3.1400e-003		414.0732
Worker	0.0343	0.0468	0.4869	1.3600e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		103.3382	103.3382	5.3700e-003		103.4509
Total	**0.1847**	**1.4320**	**2.6735**	**5.6900e-003**	**0.2366**	**0.0230**	**0.2596**	**0.0652**	**0.0212**	**0.0863**		**517.3454**	**517.3454**	**8.5100e-003**		**517.5241**

Ocean Charter School

Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9688	9.9201	9.3027	0.0134		0.6065	0.6065		0.5580	0.5580	0.0000	1,322.3619	1,322.3619	0.4184		1,331.1479
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9688**	**9.9201**	**9.3027**	**0.0134**		**0.6065**	**0.6065**		**0.5580**	**0.5580**	**0.0000**	**1,322.3619**	**1,322.3619**	**0.4184**		**1,331.1479**

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	0.1504	1.3853	2.1866	4.3300e-003	0.1166	0.0220	0.1386	0.0335	0.0203	0.0538		414.0073	414.0073	3.1400e-003		414.0732
Worker	0.0343	0.0468	0.4869	1.3600e-003	0.1030	9.6000e-004	0.1040	0.0275	8.9000e-004	0.0284		103.3382	103.3382	5.3700e-003		103.4509
Total	**0.1847**	**1.4320**	**2.6735**	**5.6900e-003**	**0.2196**	**0.0230**	**0.2426**	**0.0610**	**0.0212**	**0.0822**		**517.3454**	**517.3454**	**8.5100e-003**		**517.5241**

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	3.4569	4.2511	38.4064	0.1155	9.5009	0.0831	9.5840	2.5198	0.0769	2.5968		8,730.3001	8,730.3001	0.3952		8,738.5995
Unmitigated	3.4569	4.2511	38.4064	0.1155	9.5009	0.0831	9.5840	2.5198	0.0769	2.5968		8,730.3001	8,730.3001	0.3952		8,738.5995

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	1,319.36	0.00	0.00	3,247,872	3,247,872
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,319.36	0.00	0.00	3,247,872	3,247,872

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
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
0.667818	0.072758	0.224784	0.020000	0.004037	0.000651	0.001752	0.003504	0.000000	0.000000	0.004640	0.000055	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
NaturalGas Unmitigated	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998

Ocean Charter School

Los Angeles-South Coast County, Winter

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1558.76	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998
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		**0.0168**	**0.1528**	**0.1284**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.3837**	**183.3837**	**3.5100e-003**	**3.3600e-003**	**184.4998**

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.08836	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
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		**0.0117**	**0.1067**	**0.0896**	**6.4000e-004**		**8.1100e-003**	**8.1100e-003**		**8.1100e-003**	**8.1100e-003**		**128.0428**	**128.0428**	**2.4500e-003**	**2.3500e-003**	**128.8220**

Ocean Charter School

Los Angeles-South Coast County, Winter

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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Unmitigated	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267

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	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3500e-003	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Total	**1.4490**	**5.2000e-004**	**0.0565**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1199**	**0.1199**	**3.2000e-004**		**0.1267**

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	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3500e-003	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Total	**1.4490**	**5.2000e-004**	**0.0565**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1199**	**0.1199**	**3.2000e-004**		**0.1267**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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

Ocean Charter School

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	532.00	Student	0.20	52,245.00	0
Enclosed Parking with Elevator	13.90	1000sqft	0.05	13,900.00	0
Other Non-Asphalt Surfaces	1.95	Acre	1.95	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

Ocean Charter School

Los Angeles-South Coast County, Summer

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0 Land Use Square Feet to exclude striping

Construction Phase - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Trips and VMT - Based on construction information provided by the Applicant.

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Based on Traffic Impact Analysis for Ocean Charter School. Garland Associates, April 2016.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Area Coating - Adjustment made due to modeling software limitation.

Water And Wastewater - 100% aerobic.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 & 1186

Energy Mitigation -

Water Mitigation -

Ocean Charter School

Los Angeles-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	33,073.00	26,957.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	99,218.00	78,368.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	82
tblAreaCoating	Area_Nonresidential_Interior	99218	31347
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	82	250
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstructionPhase	NumDays	10.00	107.00
tblConstructionPhase	NumDays	220.00	154.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	PhaseEndDate	4/30/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	3/14/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	3/6/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	6/28/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	5/29/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	12/1/2018	11/1/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/23/2018
tblConstructionPhase	PhaseStartDate	5/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	4/1/2019	3/1/2019

tblGrading	MaterialExported	0.00	20,833.00
tblLandUse	LandUseSquareFeet	44,476.99	52,245.00
tblLandUse	LandUseSquareFeet	84,942.00	0.00
tblLandUse	LotAcreage	1.02	0.20
tblLandUse	LotAcreage	0.32	0.05
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripNumber	113.00	181.00
tblTripsAndVMT	HaulingTripNumber	47.00	75.00
tblTripsAndVMT	HaulingTripNumber	2,604.00	2,977.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	11.00	49.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00

tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00

tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleTrips	WD_TR	1.29	2.48
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

Ocean Charter School

Los Angeles-South Coast County, Summer

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					
2018	8.0544	48.4218	35.0154	0.1156	6.2327	1.8179	7.3409	1.0971	1.7045	2.3187	0.0000	11,315.9186	11,315.9186	0.9471	0.0000	11,335.8078
2019	6.0773	13.7881	14.3544	0.0240	0.3037	0.8016	1.1052	0.0830	0.7512	0.8342	0.0000	2,290.3465	2,290.3465	0.4617	0.0000	2,300.0424
Total	**14.1317**	**62.2100**	**49.3698**	**0.1396**	**6.5364**	**2.6194**	**8.4461**	**1.1801**	**2.4557**	**3.1529**	**0.0000**	**13,606.2652**	**13,606.2652**	**1.4088**	**0.0000**	**13,635.8502**

Ocean Charter School

Los Angeles-South Coast County, Summer

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					
2018	8.0544	48.4218	35.0154	0.1156	3.2985	1.8179	4.4066	0.6447	1.7045	2.2743	0.0000	11,315.9186	11,315.9186	0.9471	0.0000	11,335.8078
2019	6.0773	13.7881	14.3544	0.0240	0.2815	0.8016	1.0830	0.0775	0.7512	0.8287	0.0000	2,290.3465	2,290.3465	0.4617	0.0000	2,300.0424
Total	**14.1317**	**62.2100**	**49.3698**	**0.1396**	**3.5799**	**2.6194**	**5.4897**	**0.7222**	**2.4557**	**3.1030**	**0.0000**	**13,606.2651**	**13,606.2651**	**1.4088**	**0.0000**	**13,635.8502**

	ROG	NOx	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**	**45.23**	**0.00**	**35.00**	**38.80**	**0.00**	**1.58**	**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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Energy	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998
Mobile	3.3337	3.8968	40.1907	0.1223	9.5009	0.0830	9.5839	2.5198	0.0769	2.5967		9,237.7003	9,237.7003	0.3952		9,245.9989
Total	**4.7995**	**4.0501**	**40.3756**	**0.1232**	**9.5009**	**0.0948**	**9.5958**	**2.5198**	**0.0887**	**2.6085**		**9,421.2039**	**9,421.2039**	**0.3990**	**3.3600e-003**	**9,430.6254**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Energy	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
Mobile	3.3337	3.8968	40.1907	0.1223	9.5009	0.0830	9.5839	2.5198	0.0769	2.5967		9,237.7003	9,237.7003	0.3952		9,245.9989
Total	**4.7944**	**4.0040**	**40.3368**	**0.1229**	**9.5009**	**0.0913**	**9.5923**	**2.5198**	**0.0852**	**2.6050**		**9,365.8630**	**9,365.8630**	**0.3979**	**2.3500e-003**	**9,374.9476**

	ROG	NOx	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	**0.11**	**1.14**	**0.10**	**0.23**	**0.00**	**3.69**	**0.04**	**0.00**	**3.95**	**0.13**	**0.00**	**0.59**	**0.59**	**0.27**	**30.06**	**0.59**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	1/1/2018	2/28/2018	5	43	
2	Asphalt/Concrete Demo Debris Haul	Demolition	2/15/2018	2/28/2018	5	10	
3	Building Demo Debris Haul	Demolition	2/23/2018	2/28/2018	5	4	
4	Grading	Grading	3/1/2018	4/30/2018	5	43	
5	Grading Soil Haul	Grading	3/1/2018	4/30/2018	5	43	
6	Building Construction	Building Construction	5/1/2018	11/30/2018	5	154	
7	Building Interiors	Architectural Coating	11/1/2018	3/31/2019	5	107	
8	Asphalt Paving & Off-Site Street Work	Paving	3/1/2019	4/30/2019	5	43	

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: 78,368; Non-Residential Outdoor: 26,957 (Architectural Coating –

Ocean Charter School

Los Angeles-South Coast County, Summer

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Asphalt/Concrete Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt/Concrete Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Asphalt/Concrete Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Building Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rollers	3	8.00	80	0.38
Grading	Trenchers	1	8.00	80	0.50
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	205	0.50
Grading Soil Haul	Graders	0	8.00	174	0.41
Grading Soil Haul	Rubber Tired Dozers	0	8.00	255	0.40
Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Interiors	Air Compressors	1	8.00	78	0.48
Asphalt Paving & Off-Site Street Work	Cement and Mortar Mixers	0	8.00	9	0.56
Asphalt Paving & Off-Site Street Work	Pavers	1	8.00	125	0.42
Asphalt Paving & Off-Site Street Work	Paving Equipment	0	8.00	130	0.36
Asphalt Paving & Off-Site Street Work	Rollers	1	8.00	80	0.38
Asphalt Paving & Off-Site Street Work	Tractors/Loaders/Backhoes	2	8.00	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	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt/Concrete Demo Debris Haul	0	0.00	0.00	181.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Demo Debris Haul	0	0.00	0.00	75.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Soil Haul	0	0.00	0.00	2,977.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	28.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Interiors	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving & Off-Site Street Work	4	10.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Ocean Charter School

Los Angeles-South Coast County, Summer

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5084	12.9878	12.4490	0.0186		0.8594	0.8594		0.8172	0.8172		1,825.4848	1,825.4848	0.4222		1,834.3516
Total	**1.5084**	**12.9878**	**12.4490**	**0.0186**		**0.8594**	**0.8594**		**0.8172**	**0.8172**		**1,825.4848**	**1,825.4848**	**0.4222**		**1,834.3516**

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	0.0290	0.2934	0.3647	8.8000e-004	0.0250	4.5900e-003	0.0296	7.1000e-003	4.2200e-003	0.0113		85.2499	85.2499	6.2000e-004		85.2629
Worker	0.0360	0.0460	0.5711	1.4500e-003	0.1118	9.8000e-004	0.1128	0.0296	9.1000e-004	0.0306		113.9736	113.9736	5.7400e-003		114.0942
Total	**0.0651**	**0.3394**	**0.9358**	**2.3300e-003**	**0.1367**	**5.5700e-003**	**0.1423**	**0.0367**	**5.1300e-003**	**0.0419**		**199.2235**	**199.2235**	**6.3600e-003**		**199.3571**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	1.5084	12.9878	12.4490	0.0186		0.8594	0.8594		0.8172	0.8172	0.0000	1,825.4848	1,825.4848	0.4222		1,834.3516
Total	**1.5084**	**12.9878**	**12.4490**	**0.0186**		**0.8594**	**0.8594**		**0.8172**	**0.8172**	**0.0000**	**1,825.4848**	**1,825.4848**	**0.4222**		**1,834.3516**

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	0.0290	0.2934	0.3647	8.8000e-004	0.0233	4.5900e-003	0.0279	6.7000e-003	4.2200e-003	0.0109		85.2499	85.2499	6.2000e-004		85.2629
Worker	0.0360	0.0460	0.5711	1.4500e-003	0.1030	9.8000e-004	0.1040	0.0275	9.1000e-004	0.0284		113.9736	113.9736	5.7400e-003		114.0942
Total	**0.0651**	**0.3394**	**0.9358**	**2.3300e-003**	**0.1264**	**5.5700e-003**	**0.1319**	**0.0342**	**5.1300e-003**	**0.0393**		**199.2235**	**199.2235**	**6.3600e-003**		**199.3571**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.3 Asphalt/Concrete Demo Debris Haul - 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					
Fugitive Dust					2.4374	0.0000	2.4374	0.3690	0.0000	0.3690			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.4374**	**0.0000**	**2.4374**	**0.3690**	**0.0000**	**0.3690**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4497	7.3245	4.4726	0.0234	0.5515	0.1195	0.6710	0.1510	0.1099	0.2609		2,283.0820	2,283.0820	0.0168		2,283.4346
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	0.0000	0.0000	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	**0.4497**	**7.3245**	**4.4726**	**0.0234**	**0.5515**	**0.1195**	**0.6710**	**0.1510**	**0.1099**	**0.2609**		**2,283.0820**	**2,283.0820**	**0.0168**		**2,283.4346**

Ocean Charter School

Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0420	0.0000	1.0420	0.1578	0.0000	0.1578			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0420**	**0.0000**	**1.0420**	**0.1578**	**0.0000**	**0.1578**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4497	7.3245	4.4726	0.0234	0.5138	0.1195	0.6333	0.1417	0.1099	0.2516		2,283.0820	2,283.0820	0.0168		2,283.4346
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	0.0000	0.0000	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	**0.4497**	**7.3245**	**4.4726**	**0.0234**	**0.5138**	**0.1195**	**0.6333**	**0.1417**	**0.1099**	**0.2516**		**2,283.0820**	**2,283.0820**	**0.0168**		**2,283.4346**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.4 Building Demo Debris Haul - 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					
Fugitive Dust					2.5358	0.0000	2.5358	0.3839	0.0000	0.3839			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.5358**	**0.0000**	**2.5358**	**0.3839**	**0.0000**	**0.3839**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4658	7.5875	4.6332	0.0242	0.5713	0.1237	0.6951	0.1564	0.1138	0.2703		2,365.0711	2,365.0711	0.0174		2,365.4364
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	0.0000	0.0000	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	**0.4658**	**7.5875**	**4.6332**	**0.0242**	**0.5713**	**0.1237**	**0.6951**	**0.1564**	**0.1138**	**0.2703**		**2,365.0711**	**2,365.0711**	**0.0174**		**2,365.4364**

Ocean Charter School

Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0841	0.0000	1.0841	0.1641	0.0000	0.1641			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0841**	**0.0000**	**1.0841**	**0.1641**	**0.0000**	**0.1641**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.4658	7.5875	4.6332	0.0242	0.5323	0.1237	0.6560	0.1468	0.1138	0.2607		2,365.0711	2,365.0711	0.0174		2,365.4364
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	0.0000	0.0000	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	**0.4658**	**7.5875**	**4.6332**	**0.0242**	**0.5323**	**0.1237**	**0.6560**	**0.1468**	**0.1138**	**0.2607**		**2,365.0711**	**2,365.0711**	**0.0174**		**2,365.4364**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.5 Grading - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0607	20.0294	16.5150	0.0228		1.3546	1.3546		1.2462	1.2462		2,292.7204	2,292.7204	0.7138		2,307.7092
Total	**2.0607**	**20.0294**	**16.5150**	**0.0228**	**0.0000**	**1.3546**	**1.3546**	**0.0000**	**1.2462**	**1.2462**		**2,292.7204**	**2,292.7204**	**0.7138**		**2,307.7092**

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	0.0290	0.2934	0.3647	8.8000e-004	0.0250	4.5900e-003	0.0296	7.1000e-003	4.2200e-003	0.0113		85.2499	85.2499	6.2000e-004		85.2629
Worker	0.0649	0.0828	1.0280	2.6200e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6300e-003	0.0550		205.1524	205.1524	0.0103		205.3695
Total	**0.0939**	**0.3762**	**1.3927**	**3.5000e-003**	**0.2262**	**6.3600e-003**	**0.2325**	**0.0605**	**5.8500e-003**	**0.0663**		**290.4023**	**290.4023**	**0.0110**		**290.6325**

Ocean Charter School

Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0607	20.0294	16.5150	0.0228		1.3546	1.3546		1.2462	1.2462	0.0000	2,292.7204	2,292.7204	0.7138		2,307.7092
Total	**2.0607**	**20.0294**	**16.5150**	**0.0228**	**0.0000**	**1.3546**	**1.3546**	**0.0000**	**1.2462**	**1.2462**	**0.0000**	**2,292.7204**	**2,292.7204**	**0.7138**		**2,307.7092**

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	0.0290	0.2934	0.3647	8.8000e-004	0.0233	4.5900e-003	0.0279	6.7000e-003	4.2200e-003	0.0109		85.2499	85.2499	6.2000e-004		85.2629
Worker	0.0649	0.0828	1.0280	2.6200e-003	0.1855	1.7700e-003	0.1872	0.0495	1.6300e-003	0.0511		205.1524	205.1524	0.0103		205.3695
Total	**0.0939**	**0.3762**	**1.3927**	**3.5000e-003**	**0.2088**	**6.3600e-003**	**0.2151**	**0.0562**	**5.8500e-003**	**0.0621**		**290.4023**	**290.4023**	**0.0110**		**290.6325**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.6 Grading Soil Haul - 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					
Fugitive Dust					0.0548	0.0000	0.0548	8.3000e-003	0.0000	8.3000e-003			0.0000			0.0000
Off-Road	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0548**	**0.0000**	**0.0548**	**8.3000e-003**	**0.0000**	**8.3000e-003**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7199	28.0163	17.1077	0.0893	2.1096	0.4569	2.5665	0.5776	0.4203	0.9979		8,732.7960	8,732.7960	0.0642		8,734.1445
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	0.0000	0.0000	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	**1.7199**	**28.0163**	**17.1077**	**0.0893**	**2.1096**	**0.4569**	**2.5665**	**0.5776**	**0.4203**	**0.9979**		**8,732.7960**	**8,732.7960**	**0.0642**		**8,734.1445**

Ocean Charter School

Los Angeles-South Coast County, Summer

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					0.0234	0.0000	0.0234	3.5500e-003	0.0000	3.5500e-003			0.0000			0.0000
Off-Road	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0234**	**0.0000**	**0.0234**	**3.5500e-003**	**0.0000**	**3.5500e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7199	28.0163	17.1077	0.0893	1.9654	0.4569	2.4223	0.5422	0.4203	0.9625		8,732.7960	8,732.7960	0.0642		8,734.1445
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	0.0000	0.0000	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	**1.7199**	**28.0163**	**17.1077**	**0.0893**	**1.9654**	**0.4569**	**2.4223**	**0.5422**	**0.4203**	**0.9625**		**8,732.7960**	**8,732.7960**	**0.0642**		**8,734.1445**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6157	26.3171	17.7409	0.0333		1.5508	1.5508		1.4489	1.4489		3,312.1315	3,312.1315	0.8843		3,330.7017
Total	**2.6157**	**26.3171**	**17.7409**	**0.0333**		**1.5508**	**1.5508**		**1.4489**	**1.4489**		**3,312.1315**	**3,312.1315**	**0.8843**		**3,330.7017**

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	0.3556	3.5940	4.4678	0.0107	0.3058	0.0563	0.3620	0.0870	0.0518	0.1388		1,044.3110	1,044.3110	7.6200e-003		1,044.4710
Worker	0.1009	0.1288	1.5991	4.0700e-003	0.3130	2.7500e-003	0.3157	0.0830	2.5400e-003	0.0855		319.1260	319.1260	0.0161		319.4637
Total	**0.4565**	**3.7228**	**6.0669**	**0.0148**	**0.6187**	**0.0590**	**0.6777**	**0.1700**	**0.0543**	**0.2243**		**1,363.4370**	**1,363.4370**	**0.0237**		**1,363.9348**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	2.6157	26.3171	17.7409	0.0333		1.5508	1.5508		1.4489	1.4489	0.0000	3,312.1315	3,312.1315	0.8843		3,330.7017
Total	**2.6157**	**26.3171**	**17.7409**	**0.0333**		**1.5508**	**1.5508**		**1.4489**	**1.4489**	**0.0000**	**3,312.1315**	**3,312.1315**	**0.8843**		**3,330.7017**

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	0.3556	3.5940	4.4678	0.0107	0.2856	0.0563	0.3419	0.0821	0.0518	0.1338		1,044.3110	1,044.3110	7.6200e-003		1,044.4710
Worker	0.1009	0.1288	1.5991	4.0700e-003	0.2885	2.7500e-003	0.2912	0.0770	2.5400e-003	0.0795		319.1260	319.1260	0.0161		319.4637
Total	**0.4565**	**3.7228**	**6.0669**	**0.0148**	**0.5741**	**0.0590**	**0.6331**	**0.1591**	**0.0543**	**0.2134**		**1,363.4370**	**1,363.4370**	**0.0237**		**1,363.9348**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.8 Building Interiors - 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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007		375.2647	375.2647	0.0357		376.0135
Total	**4.9606**	**2.6743**	**2.4723**	**3.9600e-003**		**0.2007**	**0.2007**		**0.2007**	**0.2007**		**375.2647**	**375.2647**	**0.0357**		**376.0135**

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	0.0216	0.0276	0.3427	8.7000e-004	0.0671	5.9000e-004	0.0677	0.0178	5.4000e-004	0.0183		68.3842	68.3842	3.4500e-003		68.4565
Total	**0.0216**	**0.0276**	**0.3427**	**8.7000e-004**	**0.0671**	**5.9000e-004**	**0.0677**	**0.0178**	**5.4000e-004**	**0.0183**		**68.3842**	**68.3842**	**3.4500e-003**		**68.4565**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3982	2.6743	2.4723	3.9600e-003		0.2007	0.2007		0.2007	0.2007	0.0000	375.2647	375.2647	0.0357		376.0135
Total	**4.9606**	**2.6743**	**2.4723**	**3.9600e-003**		**0.2007**	**0.2007**		**0.2007**	**0.2007**	**0.0000**	**375.2647**	**375.2647**	**0.0357**		**376.0135**

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	0.0216	0.0276	0.3427	8.7000e-004	0.0618	5.9000e-004	0.0624	0.0165	5.4000e-004	0.0170		68.3842	68.3842	3.4500e-003		68.4565
Total	**0.0216**	**0.0276**	**0.3427**	**8.7000e-004**	**0.0618**	**5.9000e-004**	**0.0624**	**0.0165**	**5.4000e-004**	**0.0170**		**68.3842**	**68.3842**	**3.4500e-003**		**68.4565**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.8 Building Interiors - 2019

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717		375.2641	375.2641	0.0317		375.9297
Total	**4.9177**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**		**375.2641**	**375.2641**	**0.0317**		**375.9297**

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	0.0199	0.0253	0.3147	8.7000e-004	0.0671	5.7000e-004	0.0676	0.0178	5.3000e-004	0.0183		65.7048	65.7048	3.2200e-003		65.7725
Total	**0.0199**	**0.0253**	**0.3147**	**8.7000e-004**	**0.0671**	**5.7000e-004**	**0.0676**	**0.0178**	**5.3000e-004**	**0.0183**		**65.7048**	**65.7048**	**3.2200e-003**		**65.7725**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	4.5624					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717	0.0000	375.2641	375.2641	0.0317		375.9297
Total	**4.9177**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**	**0.0000**	**375.2641**	**375.2641**	**0.0317**		**375.9297**

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	0.0199	0.0253	0.3147	8.7000e-004	0.0618	5.7000e-004	0.0624	0.0165	5.3000e-004	0.0170		65.7048	65.7048	3.2200e-003		65.7725
Total	**0.0199**	**0.0253**	**0.3147**	**8.7000e-004**	**0.0618**	**5.7000e-004**	**0.0624**	**0.0165**	**5.3000e-004**	**0.0170**		**65.7048**	**65.7048**	**3.2200e-003**		**65.7725**

Ocean Charter School

Los Angeles-South Coast County, Summer

3.9 Asphalt Paving & Off-Site Street Work - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9688	9.9201	9.3027	0.0134		0.6065	0.6065		0.5580	0.5580		1,322.3619	1,322.3619	0.4184		1,331.1479
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9688**	**9.9201**	**9.3027**	**0.0134**		**0.6065**	**0.6065**		**0.5580**	**0.5580**		**1,322.3619**	**1,322.3619**	**0.4184**		**1,331.1479**

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	0.1378	1.3534	1.7575	4.3600e-003	0.1248	0.0218	0.1466	0.0355	0.0201	0.0556		417.5077	417.5077	3.0400e-003		417.5716
Worker	0.0331	0.0422	0.5244	1.4500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		109.5080	109.5080	5.3700e-003		109.6208
Total	**0.1709**	**1.3956**	**2.2820**	**5.8100e-003**	**0.2366**	**0.0228**	**0.2594**	**0.0652**	**0.0210**	**0.0861**		**527.0157**	**527.0157**	**8.4100e-003**		**527.1924**

Ocean Charter School

Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9688	9.9201	9.3027	0.0134		0.6065	0.6065		0.5580	0.5580	0.0000	1,322.3619	1,322.3619	0.4184		1,331.1479
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9688**	**9.9201**	**9.3027**	**0.0134**		**0.6065**	**0.6065**		**0.5580**	**0.5580**	**0.0000**	**1,322.3619**	**1,322.3619**	**0.4184**		**1,331.1479**

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	0.1378	1.3534	1.7575	4.3600e-003	0.1166	0.0218	0.1384	0.0335	0.0201	0.0536		417.5077	417.5077	3.0400e-003		417.5716
Worker	0.0331	0.0422	0.5244	1.4500e-003	0.1030	9.6000e-004	0.1040	0.0275	8.9000e-004	0.0284		109.5080	109.5080	5.3700e-003		109.6208
Total	**0.1709**	**1.3956**	**2.2820**	**5.8100e-003**	**0.2196**	**0.0228**	**0.2424**	**0.0610**	**0.0210**	**0.0820**		**527.0157**	**527.0157**	**8.4100e-003**		**527.1924**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	3.3337	3.8968	40.1907	0.1223	9.5009	0.0830	9.5839	2.5198	0.0769	2.5967		9,237.7003	9,237.7003	0.3952		9,245.9989
Unmitigated	3.3337	3.8968	40.1907	0.1223	9.5009	0.0830	9.5839	2.5198	0.0769	2.5967		9,237.7003	9,237.7003	0.3952		9,245.9989

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	1,319.36	0.00	0.00	3,247,872	3,247,872
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,319.36	0.00	0.00	3,247,872	3,247,872

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
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
0.667818	0.072758	0.224784	0.020000	0.004037	0.000651	0.001752	0.003504	0.000000	0.000000	0.004640	0.000055	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
NaturalGas Unmitigated	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998

Ocean Charter School

Los Angeles-South Coast County, Summer

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1558.76	0.0168	0.1528	0.1284	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.3837	183.3837	3.5100e-003	3.3600e-003	184.4998
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		**0.0168**	**0.1528**	**0.1284**	**9.2000e-004**		**0.0116**	**0.0116**		**0.0116**	**0.0116**		**183.3837**	**183.3837**	**3.5100e-003**	**3.3600e-003**	**184.4998**

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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.08836	0.0117	0.1067	0.0896	6.4000e-004		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003		128.0428	128.0428	2.4500e-003	2.3500e-003	128.8220
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		**0.0117**	**0.1067**	**0.0896**	**6.4000e-004**		**8.1100e-003**	**8.1100e-003**		**8.1100e-003**	**8.1100e-003**		**128.0428**	**128.0428**	**2.4500e-003**	**2.3500e-003**	**128.8220**

Ocean Charter School

Los Angeles-South Coast County, Summer

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	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Unmitigated	1.4490	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267

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	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3500e-003	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Total	**1.4490**	**5.2000e-004**	**0.0565**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1199**	**0.1199**	**3.2000e-004**		**0.1267**

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	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3500e-003	5.2000e-004	0.0565	0.0000		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004		0.1199	0.1199	3.2000e-004		0.1267
Total	**1.4490**	**5.2000e-004**	**0.0565**	**0.0000**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**		**0.1199**	**0.1199**	**3.2000e-004**		**0.1267**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Ocean Charter School

Los Angeles-South Coast County, Summer

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

Ocean Charter School

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	532.00	Student	0.20	52,245.00	0
Enclosed Parking with Elevator	13.90	1000sqft	0.05	13,900.00	0
Other Non-Asphalt Surfaces	1.95	Acre	1.95	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

Ocean Charter School

Los Angeles-South Coast County, Annual

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0 Land Use Square Feet to exclude striping

Construction Phase - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Based on construction information provided by the Applicant.

Off-road Equipment - Placeholder only.

Trips and VMT - Based on construction information provided by the Applicant.

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Based on Traffic Impact Analysis for Ocean Charter School. Garland Associates, April 2016.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Vechicle Emission Factors - Adjusted for school.

Area Coating - Adjustment made due to modeling software limitation.

Water And Wastewater - 100% aerobic.

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 & 1186

Energy Mitigation -

Water Mitigation -

Ocean Charter School

Los Angeles-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	33,073.00	26,957.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	99,218.00	78,368.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	82
tblAreaCoating	Area_Nonresidential_Interior	99218	31347
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	82	250
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstructionPhase	NumDays	10.00	107.00
tblConstructionPhase	NumDays	220.00	154.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	6.00	43.00
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	PhaseEndDate	4/30/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	3/14/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	3/6/2018	2/28/2018
tblConstructionPhase	PhaseEndDate	6/28/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	5/29/2019	4/30/2019
tblConstructionPhase	PhaseStartDate	12/1/2018	11/1/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	3/1/2018	2/23/2018
tblConstructionPhase	PhaseStartDate	5/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	4/1/2019	3/1/2019

tblGrading	MaterialExported	0.00	20,833.00
tblLandUse	LandUseSquareFeet	44,476.99	52,245.00
tblLandUse	LandUseSquareFeet	84,942.00	0.00
tblLandUse	LotAcreage	1.02	0.20
tblLandUse	LotAcreage	0.32	0.05
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripNumber	113.00	181.00
tblTripsAndVMT	HaulingTripNumber	47.00	75.00
tblTripsAndVMT	HaulingTripNumber	2,604.00	2,977.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	11.00	49.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00

tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	HHD	0.03	3.5040e-003
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDA	0.53	0.67
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LDT2	0.18	0.22
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD1	0.04	4.0370e-003
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	LHD2	6.2980e-003	6.5100e-004
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MCY	3.6890e-003	4.6400e-003
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00
tblVehicleEF	MH	1.6780e-003	0.00

tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	MHD	0.02	1.7520e-003
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	OBUS	2.4960e-003	0.00
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	SBUS	5.3600e-004	5.5000e-005
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleEF	UBUS	3.1490e-003	0.00
tblVehicleTrips	WD_TR	1.29	2.48
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

Ocean Charter School

Los Angeles-South Coast County, Annual

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4663	3.8013	3.0640	6.8900e-003	0.1227	0.1868	0.3095	0.0314	0.1745	0.2059	0.0000	608.5072	608.5072	0.0881	0.0000	610.3564
2019	0.1826	0.3239	0.3438	5.6000e-004	7.1000e-003	0.0190	0.0261	1.9400e-003	0.0180	0.0199	0.0000	48.6775	48.6775	9.3400e-003	0.0000	48.8736
Total	**0.6490**	**4.1252**	**3.4077**	**7.4500e-003**	**0.1298**	**0.2059**	**0.3357**	**0.0333**	**0.1925**	**0.2258**	**0.0000**	**657.1847**	**657.1847**	**0.0974**	**0.0000**	**659.2300**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4663	3.8013	3.0640	6.8900e-003	0.1048	0.1868	0.2916	0.0280	0.1745	0.2025	0.0000	608.5068	608.5068	0.0881	0.0000	610.3560
2019	0.1826	0.3239	0.3438	5.6000e-004	6.5800e-003	0.0190	0.0256	1.8100e-003	0.0180	0.0198	0.0000	48.6775	48.6775	9.3400e-003	0.0000	48.8736
Total	**0.6490**	**4.1252**	**3.4077**	**7.4500e-003**	**0.1114**	**0.2059**	**0.3173**	**0.0298**	**0.1925**	**0.2223**	**0.0000**	**657.1843**	**657.1843**	**0.0974**	**0.0000**	**659.2296**

	ROG	NOx	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**	**14.18**	**0.00**	**5.49**	**10.59**	**0.00**	**1.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Ocean Charter School

Los Angeles-South Coast County, Annual

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2641	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	157.3414	157.3414	6.4200e-003	1.7600e-003	158.0231
Mobile	0.4244	0.5651	5.0722	0.0152	1.2109	0.0108	1.2216	0.3216	9.9800e-003	0.3316	0.0000	1,044.5721	1,044.5721	0.0466	0.0000	1,045.5497
Waste						0.0000	0.0000		0.0000	0.0000	19.7084	0.0000	19.7084	1.1647	0.0000	44.1678
Water						0.0000	0.0000		0.0000	0.0000	0.4563	15.3494	15.8057	2.2800e-003	1.1400e-003	16.2064
Total	**0.6916**	**0.5931**	**5.1027**	**0.0154**	**1.2109**	**0.0129**	**1.2238**	**0.3216**	**0.0121**	**0.3338**	**20.1647**	**1,217.2765**	**1,237.4411**	**1.2200**	**2.9000e-003**	**1,263.9613**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2641	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144
Energy	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	132.2874	132.2874	5.5100e-003	1.4500e-003	132.8511
Mobile	0.4244	0.5651	5.0722	0.0152	1.2109	0.0108	1.2216	0.3216	9.9800e-003	0.3316	0.0000	1,044.5721	1,044.5721	0.0466	0.0000	1,045.5497
Waste						0.0000	0.0000		0.0000	0.0000	19.7084	0.0000	19.7084	1.1647	0.0000	44.1678
Water						0.0000	0.0000		0.0000	0.0000	0.3650	13.7451	14.1101	1.8800e-003	9.2000e-004	14.4358
Total	**0.6906**	**0.5847**	**5.0956**	**0.0154**	**1.2109**	**0.0123**	**1.2232**	**0.3216**	**0.0115**	**0.3331**	**20.0734**	**1,190.6182**	**1,210.6916**	**1.2187**	**2.3700e-003**	**1,237.0188**

	ROG	NOx	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	**0.13**	**1.42**	**0.14**	**0.32**	**0.00**	**4.95**	**0.05**	**0.00**	**5.28**	**0.19**	**0.45**	**2.19**	**2.16**	**0.11**	**18.28**	**2.13**

Ocean Charter School

Los Angeles-South Coast County, Annual

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	1/1/2018	2/28/2018	5	43	
2	Asphalt/Concrete Demo Debris Haul	Demolition	2/15/2018	2/28/2018	5	10	
3	Building Demo Debris Haul	Demolition	2/23/2018	2/28/2018	5	4	
4	Grading	Grading	3/1/2018	4/30/2018	5	43	
5	Grading Soil Haul	Grading	3/1/2018	4/30/2018	5	43	
6	Building Construction	Building Construction	5/1/2018	11/30/2018	5	154	
7	Building Interiors	Architectural Coating	11/1/2018	3/31/2019	5	107	
8	Asphalt Paving & Off-Site Street Work	Paving	3/1/2019	4/30/2019	5	43	

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: 78,368; Non-Residential Outdoor: 26,957 (Architectural Coating –

Ocean Charter School

Los Angeles-South Coast County, Annual

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	162	0.38
Demolition	Crushing/Proc. Equipment	1	8.00	85	0.78
Demolition	Rubber Tired Dozers	0	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Asphalt/Concrete Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt/Concrete Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Asphalt/Concrete Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Demo Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Building Demo Debris Haul	Rubber Tired Dozers	0	8.00	255	0.40
Building Demo Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	1	8.00	162	0.38
Grading	Graders	0	8.00	174	0.41
Grading	Rollers	3	8.00	80	0.38
Grading	Trenchers	1	8.00	80	0.50
Grading	Rubber Tired Dozers	0	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Bore/Drill Rigs	1	8.00	205	0.50
Grading Soil Haul	Graders	0	8.00	174	0.41
Grading Soil Haul	Rubber Tired Dozers	0	8.00	255	0.40
Grading Soil Haul	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	0	8.00	46	0.45
Building Interiors	Air Compressors	1	8.00	78	0.48
Asphalt Paving & Off-Site Street Work	Cement and Mortar Mixers	0	8.00	9	0.56
Asphalt Paving & Off-Site Street Work	Pavers	1	8.00	125	0.42
Asphalt Paving & Off-Site Street Work	Paving Equipment	0	8.00	130	0.36
Asphalt Paving & Off-Site Street Work	Rollers	1	8.00	80	0.38
Asphalt Paving & Off-Site Street Work	Tractors/Loaders/Backhoes	2	8.00	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	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt/Concrete Demo Debris Haul	0	0.00	0.00	181.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Demo Debris Haul	0	0.00	0.00	75.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading Soil Haul	0	0.00	0.00	2,977.00	14.70	6.90	35.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	28.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Interiors	1	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving & Off-Site Street Work	4	10.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Ocean Charter School

Los Angeles-South Coast County, Annual

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.2792	0.2677	4.0000e-004		0.0185	0.0185		0.0176	0.0176	0.0000	35.6051	35.6051	8.2400e-003	0.0000	35.7781
Total	**0.0324**	**0.2792**	**0.2677**	**4.0000e-004**		**0.0185**	**0.0185**		**0.0176**	**0.0176**	**0.0000**	**35.6051**	**35.6051**	**8.2400e-003**	**0.0000**	**35.7781**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	6.5900e-003	9.2800e-003	2.0000e-005	5.3000e-004	1.0000e-004	6.3000e-004	1.5000e-004	9.0000e-005	2.4000e-004	0.0000	1.6569	1.6569	1.0000e-005	0.0000	1.6572
Worker	7.5000e-004	1.1300e-003	0.0117	3.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.1317	2.1317	1.1000e-004	0.0000	2.1341
Total	**1.4100e-003**	**7.7200e-003**	**0.0210**	**5.0000e-005**	**2.8900e-003**	**1.2000e-004**	**3.0100e-003**	**7.8000e-004**	**1.1000e-004**	**8.9000e-004**	**0.0000**	**3.7886**	**3.7886**	**1.2000e-004**	**0.0000**	**3.7912**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0324	0.2792	0.2677	4.0000e-004		0.0185	0.0185		0.0176	0.0176	0.0000	35.6051	35.6051	8.2400e-003	0.0000	35.7780
Total	**0.0324**	**0.2792**	**0.2677**	**4.0000e-004**		**0.0185**	**0.0185**		**0.0176**	**0.0176**	**0.0000**	**35.6051**	**35.6051**	**8.2400e-003**	**0.0000**	**35.7780**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	6.5900e-003	9.2800e-003	2.0000e-005	4.9000e-004	1.0000e-004	5.9000e-004	1.4000e-004	9.0000e-005	2.3000e-004	0.0000	1.6569	1.6569	1.0000e-005	0.0000	1.6572
Worker	7.5000e-004	1.1300e-003	0.0117	3.0000e-005	2.1700e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.1317	2.1317	1.1000e-004	0.0000	2.1341
Total	**1.4100e-003**	**7.7200e-003**	**0.0210**	**5.0000e-005**	**2.6600e-003**	**1.2000e-004**	**2.7800e-003**	**7.2000e-004**	**1.1000e-004**	**8.3000e-004**	**0.0000**	**3.7886**	**3.7886**	**1.2000e-004**	**0.0000**	**3.7912**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.3 Asphalt/Concrete Demo Debris Haul - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.8500e-003	0.0000	1.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0122**	**0.0000**	**0.0122**	**1.8500e-003**	**0.0000**	**1.8500e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3000e-003	0.0386	0.0246	1.2000e-004	2.7100e-003	6.0000e-004	3.3100e-003	7.4000e-004	5.5000e-004	1.2900e-003	0.0000	10.3500	10.3500	8.0000e-005	0.0000	10.3516
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**2.3000e-003**	**0.0386**	**0.0246**	**1.2000e-004**	**2.7100e-003**	**6.0000e-004**	**3.3100e-003**	**7.4000e-004**	**5.5000e-004**	**1.2900e-003**	**0.0000**	**10.3500**	**10.3500**	**8.0000e-005**	**0.0000**	**10.3516**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.2100e-003	0.0000	5.2100e-003	7.9000e-004	0.0000	7.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.2100e-003**	**0.0000**	**5.2100e-003**	**7.9000e-004**	**0.0000**	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.3000e-003	0.0386	0.0246	1.2000e-004	2.5300e-003	6.0000e-004	3.1200e-003	7.0000e-004	5.5000e-004	1.2500e-003	0.0000	10.3500	10.3500	8.0000e-005	0.0000	10.3516
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**2.3000e-003**	**0.0386**	**0.0246**	**1.2000e-004**	**2.5300e-003**	**6.0000e-004**	**3.1200e-003**	**7.0000e-004**	**5.5000e-004**	**1.2500e-003**	**0.0000**	**10.3500**	**10.3500**	**8.0000e-005**	**0.0000**	**10.3516**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.4 Building Demo Debris Haul - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0700e-003	0.0000	5.0700e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0700e-003**	**0.0000**	**5.0700e-003**	**7.7000e-004**	**0.0000**	**7.7000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5000e-004	0.0160	0.0102	5.0000e-005	1.1200e-003	2.5000e-004	1.3700e-003	3.1000e-004	2.3000e-004	5.4000e-004	0.0000	4.2887	4.2887	3.0000e-005	0.0000	4.2893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**9.5000e-004**	**0.0160**	**0.0102**	**5.0000e-005**	**1.1200e-003**	**2.5000e-004**	**1.3700e-003**	**3.1000e-004**	**2.3000e-004**	**5.4000e-004**	**0.0000**	**4.2887**	**4.2887**	**3.0000e-005**	**0.0000**	**4.2893**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1700e-003	0.0000	2.1700e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.1700e-003**	**0.0000**	**2.1700e-003**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5000e-004	0.0160	0.0102	5.0000e-005	1.0500e-003	2.5000e-004	1.2900e-003	2.9000e-004	2.3000e-004	5.2000e-004	0.0000	4.2887	4.2887	3.0000e-005	0.0000	4.2893
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**9.5000e-004**	**0.0160**	**0.0102**	**5.0000e-005**	**1.0500e-003**	**2.5000e-004**	**1.2900e-003**	**2.9000e-004**	**2.3000e-004**	**5.2000e-004**	**0.0000**	**4.2887**	**4.2887**	**3.0000e-005**	**0.0000**	**4.2893**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.5 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.4306	0.3551	4.9000e-004		0.0291	0.0291		0.0268	0.0268	0.0000	44.7183	44.7183	0.0139	0.0000	45.0107
Total	**0.0443**	**0.4306**	**0.3551**	**4.9000e-004**	**0.0000**	**0.0291**	**0.0291**	**0.0000**	**0.0268**	**0.0268**	**0.0000**	**44.7183**	**44.7183**	**0.0139**	**0.0000**	**45.0107**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	6.5900e-003	9.2800e-003	2.0000e-005	5.3000e-004	1.0000e-004	6.3000e-004	1.5000e-004	9.0000e-005	2.4000e-004	0.0000	1.6569	1.6569	1.0000e-005	0.0000	1.6572
Worker	1.3600e-003	2.0300e-003	0.0211	5.0000e-005	4.2400e-003	4.0000e-005	4.2800e-003	1.1300e-003	4.0000e-005	1.1600e-003	0.0000	3.8371	3.8371	2.0000e-004	0.0000	3.8413
Total	**2.0200e-003**	**8.6200e-003**	**0.0303**	**7.0000e-005**	**4.7700e-003**	**1.4000e-004**	**4.9100e-003**	**1.2800e-003**	**1.3000e-004**	**1.4000e-003**	**0.0000**	**5.4940**	**5.4940**	**2.1000e-004**	**0.0000**	**5.4985**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.4306	0.3551	4.9000e-004		0.0291	0.0291		0.0268	0.0268	0.0000	44.7183	44.7183	0.0139	0.0000	45.0106
Total	**0.0443**	**0.4306**	**0.3551**	**4.9000e-004**	**0.0000**	**0.0291**	**0.0291**	**0.0000**	**0.0268**	**0.0268**	**0.0000**	**44.7183**	**44.7183**	**0.0139**	**0.0000**	**45.0106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	6.5900e-003	9.2800e-003	2.0000e-005	4.9000e-004	1.0000e-004	5.9000e-004	1.4000e-004	9.0000e-005	2.3000e-004	0.0000	1.6569	1.6569	1.0000e-005	0.0000	1.6572
Worker	1.3600e-003	2.0300e-003	0.0211	5.0000e-005	3.9100e-003	4.0000e-005	3.9500e-003	1.0500e-003	4.0000e-005	1.0800e-003	0.0000	3.8371	3.8371	2.0000e-004	0.0000	3.8413
Total	**2.0200e-003**	**8.6200e-003**	**0.0303**	**7.0000e-005**	**4.4000e-003**	**1.4000e-004**	**4.5400e-003**	**1.1900e-003**	**1.3000e-004**	**1.3100e-003**	**0.0000**	**5.4940**	**5.4940**	**2.1000e-004**	**0.0000**	**5.4985**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.6 Grading Soil Haul - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1800e-003	0.0000	1.1800e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1800e-003**	**0.0000**	**1.1800e-003**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0378	0.6356	0.4043	1.9200e-003	0.0446	9.8300e-003	0.0544	0.0122	9.0400e-003	0.0213	0.0000	170.2315	170.2315	1.2600e-003	0.0000	170.2579
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**0.0378**	**0.6356**	**0.4043**	**1.9200e-003**	**0.0446**	**9.8300e-003**	**0.0544**	**0.0122**	**9.0400e-003**	**0.0213**	**0.0000**	**170.2315**	**170.2315**	**1.2600e-003**	**0.0000**	**170.2579**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.0000e-004	0.0000	5.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0378	0.6356	0.4043	1.9200e-003	0.0416	9.8300e-003	0.0514	0.0115	9.0400e-003	0.0205	0.0000	170.2315	170.2315	1.2600e-003	0.0000	170.2579
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	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	**0.0378**	**0.6356**	**0.4043**	**1.9200e-003**	**0.0416**	**9.8300e-003**	**0.0514**	**0.0115**	**9.0400e-003**	**0.0205**	**0.0000**	**170.2315**	**170.2315**	**1.2600e-003**	**0.0000**	**170.2579**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.7 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2014	2.0264	1.3661	2.5600e-003		0.1194	0.1194		0.1116	0.1116	0.0000	231.3631	231.3631	0.0618	0.0000	232.6603
Total	**0.2014**	**2.0264**	**1.3661**	**2.5600e-003**		**0.1194**	**0.1194**		**0.1116**	**0.1116**	**0.0000**	**231.3631**	**231.3631**	**0.0618**	**0.0000**	**232.6603**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	0.2890	0.4073	8.3000e-004	0.0232	4.3500e-003	0.0275	6.6000e-003	4.0000e-003	0.0106	0.0000	72.6931	72.6931	5.4000e-004	0.0000	72.7044
Worker	7.5700e-003	0.0113	0.1173	3.0000e-004	0.0236	2.1000e-004	0.0238	6.2700e-003	2.0000e-004	6.4700e-003	0.0000	21.3765	21.3765	1.1200e-003	0.0000	21.4001
Total	**0.0366**	**0.3003**	**0.5246**	**1.1300e-003**	**0.0468**	**4.5600e-003**	**0.0513**	**0.0129**	**4.2000e-003**	**0.0171**	**0.0000**	**94.0696**	**94.0696**	**1.6600e-003**	**0.0000**	**94.1045**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2014	2.0264	1.3661	2.5600e-003		0.1194	0.1194		0.1116	0.1116	0.0000	231.3628	231.3628	0.0618	0.0000	232.6600
Total	**0.2014**	**2.0264**	**1.3661**	**2.5600e-003**		**0.1194**	**0.1194**		**0.1116**	**0.1116**	**0.0000**	**231.3628**	**231.3628**	**0.0618**	**0.0000**	**232.6600**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	0.2890	0.4073	8.3000e-004	0.0216	4.3500e-003	0.0260	6.2300e-003	4.0000e-003	0.0102	0.0000	72.6931	72.6931	5.4000e-004	0.0000	72.7044
Worker	7.5700e-003	0.0113	0.1173	3.0000e-004	0.0218	2.1000e-004	0.0220	5.8200e-003	2.0000e-004	6.0200e-003	0.0000	21.3765	21.3765	1.1200e-003	0.0000	21.4001
Total	**0.0366**	**0.3003**	**0.5246**	**1.1300e-003**	**0.0434**	**4.5600e-003**	**0.0480**	**0.0121**	**4.2000e-003**	**0.0163**	**0.0000**	**94.0696**	**94.0696**	**1.6600e-003**	**0.0000**	**94.1045**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.8 Building Interiors - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5600e-003	0.0575	0.0532	9.0000e-005		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	7.3193	7.3193	7.0000e-004	0.0000	7.3340
Total	**0.1067**	**0.0575**	**0.0532**	**9.0000e-005**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**7.3193**	**7.3193**	**7.0000e-004**	**0.0000**	**7.3340**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.8000e-004	7.0200e-003	2.0000e-005	1.4100e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2790	1.2790	7.0000e-005	0.0000	1.2804
Total	**4.5000e-004**	**6.8000e-004**	**7.0200e-003**	**2.0000e-005**	**1.4100e-003**	**1.0000e-005**	**1.4300e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.2790**	**1.2790**	**7.0000e-005**	**0.0000**	**1.2804**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0981					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5600e-003	0.0575	0.0532	9.0000e-005		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	7.3193	7.3193	7.0000e-004	0.0000	7.3339
Total	**0.1067**	**0.0575**	**0.0532**	**9.0000e-005**		**4.3200e-003**	**4.3200e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**7.3193**	**7.3193**	**7.0000e-004**	**0.0000**	**7.3339**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5000e-004	6.8000e-004	7.0200e-003	2.0000e-005	1.3000e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2790	1.2790	7.0000e-005	0.0000	1.2804
Total	**4.5000e-004**	**6.8000e-004**	**7.0200e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.2790**	**1.2790**	**7.0000e-005**	**0.0000**	**1.2804**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.8 Building Interiors - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.0783	0.0786	1.3000e-004		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	10.8939	10.8939	9.2000e-004	0.0000	10.9132
Total	**0.1574**	**0.0783**	**0.0786**	**1.3000e-004**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**10.8939**	**10.8939**	**9.2000e-004**	**0.0000**	**10.9132**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	9.2000e-004	9.5700e-003	3.0000e-005	2.1000e-003	2.0000e-005	2.1200e-003	5.6000e-004	2.0000e-005	5.8000e-004	0.0000	1.8290	1.8290	9.0000e-005	0.0000	1.8310
Total	**6.2000e-004**	**9.2000e-004**	**9.5700e-003**	**3.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1200e-003**	**5.6000e-004**	**2.0000e-005**	**5.8000e-004**	**0.0000**	**1.8290**	**1.8290**	**9.0000e-005**	**0.0000**	**1.8310**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.0783	0.0786	1.3000e-004		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	10.8939	10.8939	9.2000e-004	0.0000	10.9132
Total	**0.1574**	**0.0783**	**0.0786**	**1.3000e-004**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**10.8939**	**10.8939**	**9.2000e-004**	**0.0000**	**10.9132**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	9.2000e-004	9.5700e-003	3.0000e-005	1.9400e-003	2.0000e-005	1.9600e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.8290	1.8290	9.0000e-005	0.0000	1.8310
Total	**6.2000e-004**	**9.2000e-004**	**9.5700e-003**	**3.0000e-005**	**1.9400e-003**	**2.0000e-005**	**1.9600e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.8290**	**1.8290**	**9.0000e-005**	**0.0000**	**1.8310**

Ocean Charter School

Los Angeles-South Coast County, Annual

3.9 Asphalt Paving & Off-Site Street Work - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0208	0.2133	0.2000	2.9000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	25.7920	25.7920	8.1600e-003	0.0000	25.9633
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0208**	**0.2133**	**0.2000**	**2.9000e-004**		**0.0130**	**0.0130**		**0.0120**	**0.0120**	**0.0000**	**25.7920**	**25.7920**	**8.1600e-003**	**0.0000**	**25.9633**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1400e-003	0.0304	0.0449	9.0000e-005	2.6400e-003	4.7000e-004	3.1100e-003	7.5000e-004	4.3000e-004	1.1900e-003	0.0000	8.1146	8.1146	6.0000e-005	0.0000	8.1159
Worker	6.9000e-004	1.0300e-003	0.0107	3.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.4000e-004	0.0000	2.0481	2.0481	1.0000e-004	0.0000	2.0503
Total	**3.8300e-003**	**0.0314**	**0.0556**	**1.2000e-004**	**5.0000e-003**	**4.9000e-004**	**5.4900e-003**	**1.3800e-003**	**4.5000e-004**	**1.8300e-003**	**0.0000**	**10.1627**	**10.1627**	**1.6000e-004**	**0.0000**	**10.1661**

Ocean Charter School

Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0208	0.2133	0.2000	2.9000e-004		0.0130	0.0130		0.0120	0.0120	0.0000	25.7919	25.7919	8.1600e-003	0.0000	25.9633
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0208**	**0.2133**	**0.2000**	**2.9000e-004**		**0.0130**	**0.0130**		**0.0120**	**0.0120**	**0.0000**	**25.7919**	**25.7919**	**8.1600e-003**	**0.0000**	**25.9633**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1400e-003	0.0304	0.0449	9.0000e-005	2.4700e-003	4.7000e-004	2.9400e-003	7.1000e-004	4.3000e-004	1.1400e-003	0.0000	8.1146	8.1146	6.0000e-005	0.0000	8.1159
Worker	6.9000e-004	1.0300e-003	0.0107	3.0000e-005	2.1700e-003	2.0000e-005	2.1900e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	2.0481	2.0481	1.0000e-004	0.0000	2.0503
Total	**3.8300e-003**	**0.0314**	**0.0556**	**1.2000e-004**	**4.6400e-003**	**4.9000e-004**	**5.1300e-003**	**1.2900e-003**	**4.5000e-004**	**1.7400e-003**	**0.0000**	**10.1627**	**10.1627**	**1.6000e-004**	**0.0000**	**10.1661**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4244	0.5651	5.0722	0.0152	1.2109	0.0108	1.2216	0.3216	9.9800e-003	0.3316	0.0000	1,044.5721	1,044.5721	0.0466	0.0000	1,045.5497
Unmitigated	0.4244	0.5651	5.0722	0.0152	1.2109	0.0108	1.2216	0.3216	9.9800e-003	0.3316	0.0000	1,044.5721	1,044.5721	0.0466	0.0000	1,045.5497

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	1,319.36	0.00	0.00	3,247,872	3,247,872
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,319.36	0.00	0.00	3,247,872	3,247,872

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
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	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
0.667818	0.072758	0.224784	0.020000	0.004037	0.000651	0.001752	0.003504	0.000000	0.000000	0.004640	0.000055	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	111.0884	111.0884	5.1100e-003	1.0600e-003	111.5232
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	126.9801	126.9801	5.8400e-003	1.2100e-003	127.4771
NaturalGas Mitigated	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1989	21.1989	4.1000e-004	3.9000e-004	21.3279
NaturalGas Unmitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3612	30.3612	5.8000e-004	5.6000e-004	30.5460

Ocean Charter School

Los Angeles-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	568948	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3612	30.3612	5.8000e-004	5.6000e-004	30.5460
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	0.0000
Total		**3.0700e-003**	**0.0279**	**0.0234**	**1.7000e-004**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**30.3612**	**30.3612**	**5.8000e-004**	**5.6000e-004**	**30.5460**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	397253	2.1400e-003	0.0195	0.0164	1.2000e-004		1.4800e-003	1.4800e-003		1.4800e-003	1.4800e-003	0.0000	21.1989	21.1989	4.1000e-004	3.9000e-004	21.3279
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	0.0000
Total		**2.1400e-003**	**0.0195**	**0.0164**	**1.2000e-004**		**1.4800e-003**	**1.4800e-003**		**1.4800e-003**	**1.4800e-003**	**0.0000**	**21.1989**	**21.1989**	**4.1000e-004**	**3.9000e-004**	**21.3279**

Ocean Charter School

Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	350041	100.1703	4.6000e-003	9.5000e-004	100.5623
Enclosed Parking with Elevator	93686	26.8098	1.2300e-003	2.5000e-004	26.9148
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**126.9801**	**5.8300e-003**	**1.2000e-003**	**127.4771**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	312762	89.5022	4.1100e-003	8.5000e-004	89.8524
Enclosed Parking with Elevator	75432.5	21.5863	9.9000e-004	2.1000e-004	21.6708
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**111.0884**	**5.1000e-003**	**1.0600e-003**	**111.5232**

Ocean Charter School

Los Angeles-South Coast County, Annual

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2641	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144
Unmitigated	0.2641	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0245					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144
Total	**0.2641**	**7.0000e-005**	**7.0600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0136**	**0.0136**	**4.0000e-005**	**0.0000**	**0.0144**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0245					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.7000e-004	7.0000e-005	7.0600e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0136	0.0136	4.0000e-005	0.0000	0.0144
Total	**0.2641**	**7.0000e-005**	**7.0600e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0136**	**0.0136**	**4.0000e-005**	**0.0000**	**0.0144**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.1101	1.8800e-003	9.2000e-004	14.4358
Unmitigated	15.8057	2.2800e-003	1.1400e-003	16.2064

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.2897 / 3.31636	15.8057	2.2800e-003	1.1400e-003	16.2064
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**15.8057**	**2.2800e-003**	**1.1400e-003**	**16.2064**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.03176 / 3.11406	14.1101	1.8800e-003	9.2000e-004	14.4358
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**14.1101**	**1.8800e-003**	**9.2000e-004**	**14.4358**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.7084	1.1647	0.0000	44.1678
Unmitigated	19.7084	1.1647	0.0000	44.1678

Ocean Charter School

Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	97.09	19.7084	1.1647	0.0000	44.1678
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**19.7084**	**1.1647**	**0.0000**	**44.1678**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	97.09	19.7084	1.1647	0.0000	44.1678
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**19.7084**	**1.1647**	**0.0000**	**44.1678**

9.0 Operational Offroad

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

10.0 Vegetation

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Asphalt Paving & Off-Site Street Work	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt/Concrete Demo Debris Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Demo Debris Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Interiors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading Soil Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Bore/Drill Rigs	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	0	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	0	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Crushing/Proc. Equipment	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Forklifts	Diesel	No Change	0	4	No Change	0.00
Generator Sets	Diesel	No Change	0	0	No Change	0.00
Graders	Diesel	No Change	0	0	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	0	No Change	0.00
Pumps	Diesel	No Change	0	1	No Change	0.00
Trenchers	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	4	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	8	No Change	0.00
Welders	Diesel	No Change	0	0	No Change	0.00

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.99300E-002	1.35810E-001	1.31720E-001	2.10000E-004	9.81000E-003	9.81000E-003	0.00000E+000	1.82132E+001	1.82132E+001	1.62000E-003	0.00000E+000	1.82472E+001
Bore/Drill Rigs	2.16200E-002	3.01210E-001	1.50150E-001	6.70000E-004	8.51000E-003	7.83000E-003	0.00000E+000	6.14963E+001	6.14963E+001	1.91400E-002	0.00000E+000	6.18983E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	4.30000E-002	5.13830E-001	1.89980E-001	4.30000E-004	2.22400E-002	2.04600E-002	0.00000E+000	3.96788E+001	3.96788E+001	1.23500E-002	0.00000E+000	3.99382E+001
Crushing/Proc. Equipment	1.45800E-002	9.75700E-002	9.46000E-002	1.50000E-004	7.14000E-003	7.14000E-003	0.00000E+000	1.29613E+001	1.29613E+001	1.19000E-003	0.00000E+000	1.29862E+001
Excavators	1.28100E-002	1.37180E-001	1.45140E-001	2.30000E-004	6.65000E-003	6.12000E-003	0.00000E+000	2.08855E+001	2.08855E+001	6.50000E-003	0.00000E+000	2.10220E+001
Forklifts	5.48700E-002	4.84940E-001	3.73060E-001	4.70000E-004	3.87000E-002	3.56000E-002	0.00000E+000	4.29702E+001	4.29702E+001	1.33800E-002	0.00000E+000	4.32512E+001
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.95000E-003	6.46000E-002	5.99900E-002	1.00000E-004	3.16000E-003	2.91000E-003	0.00000E+000	8.73009E+000	8.73009E+000	2.76000E-003	0.00000E+000	8.78810E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	4.09400E-002	3.21460E-001	2.93010E-001	5.10000E-004	2.12700E-002	2.12700E-002	0.00000E+000	4.35210E+001	4.35210E+001	3.29000E-003	0.00000E+000	4.35901E+001
Rollers	2.13000E-002	2.06970E-001	1.64270E-001	2.20000E-004	1.41000E-002	1.29700E-002	0.00000E+000	2.03120E+001	2.03120E+001	6.35000E-003	0.00000E+000	2.04453E+001
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	7.38800E-002	7.31640E-001	6.59830E-001	8.80000E-004	5.14200E-002	4.73100E-002	0.00000E+000	8.00958E+001	8.00958E+001	2.50000E-002	0.00000E+000	8.06207E+001
Trenchers	1.00300E-002	9.01700E-002	5.87600E-002	7.00000E-005	6.86000E-003	6.31000E-003	0.00000E+000	6.82749E+000	6.82749E+000	2.13000E-003	0.00000E+000	6.87212E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.99300E-002	1.35810E-001	1.31720E-001	2.10000E-004	9.81000E-003	9.81000E-003	0.00000E+000	1.82132E+001	1.82132E+001	1.62000E-003	0.00000E+000	1.82471E+001
Bore/Drill Rigs	2.16200E-002	3.01210E-001	1.50150E-001	6.70000E-004	8.51000E-003	7.83000E-003	0.00000E+000	6.14962E+001	6.14962E+001	1.91400E-002	0.00000E+000	6.18982E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	4.30000E-002	5.13830E-001	1.89980E-001	4.30000E-004	2.22400E-002	2.04600E-002	0.00000E+000	3.96787E+001	3.96787E+001	1.23500E-002	0.00000E+000	3.99381E+001
Crushing/Proc. Equipment	1.45800E-002	9.75700E-002	9.46000E-002	1.50000E-004	7.14000E-003	7.14000E-003	0.00000E+000	1.29613E+001	1.29613E+001	1.19000E-003	0.00000E+000	1.29862E+001
Excavators	1.28100E-002	1.37180E-001	1.45140E-001	2.30000E-004	6.65000E-003	6.12000E-003	0.00000E+000	2.08855E+001	2.08855E+001	6.50000E-003	0.00000E+000	2.10220E+001
Forklifts	5.48700E-002	4.84940E-001	3.73060E-001	4.70000E-004	3.87000E-002	3.56000E-002	0.00000E+000	4.29702E+001	4.29702E+001	1.33800E-002	0.00000E+000	4.32511E+001
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.95000E-003	6.46000E-002	5.99900E-002	1.00000E-004	3.16000E-003	2.91000E-003	0.00000E+000	8.73008E+000	8.73008E+000	2.76000E-003	0.00000E+000	8.78809E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	4.09400E-002	3.21460E-001	2.93010E-001	5.10000E-004	2.12700E-002	2.12700E-002	0.00000E+000	4.35209E+001	4.35209E+001	3.29000E-003	0.00000E+000	4.35901E+001
Rollers	2.13000E-002	2.06970E-001	1.64270E-001	2.20000E-004	1.41000E-002	1.29700E-002	0.00000E+000	2.03120E+001	2.03120E+001	6.35000E-003	0.00000E+000	2.04453E+001
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	7.38800E-002	7.31640E-001	6.59830E-001	8.80000E-004	5.14200E-002	4.73100E-002	0.00000E+000	8.00957E+001	8.00957E+001	2.50000E-002	0.00000E+000	8.06206E+001
Trenchers	1.00300E-002	9.01700E-002	5.87600E-002	7.00000E-005	6.86000E-003	6.31000E-003	0.00000E+000	6.82748E+000	6.82748E+000	2.13000E-003	0.00000E+000	6.87211E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.09810E-006	1.09810E-006	0.00000E+000	0.00000E+000	1.09606E-006
Bore/Drill Rigs	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13828E-006	1.13828E-006	0.00000E+000	0.00000E+000	1.13089E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.26012E-006	1.26012E-006	0.00000E+000	0.00000E+000	1.25193E-006
Crushing/Proc. Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.54305E-006	1.54305E-006	0.00000E+000	0.00000E+000	7.70048E-007
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.43640E-006	1.43640E-006	0.00000E+000	0.00000E+000	1.42707E-006
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.39632E-006	1.39632E-006	0.00000E+000	0.00000E+000	1.15604E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14546E-006	1.14546E-006	0.00000E+000	0.00000E+000	1.13790E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.14887E-006	1.14887E-006	0.00000E+000	0.00000E+000	1.37646E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.84640E-007	9.84640E-007	0.00000E+000	0.00000E+000	9.78218E-007
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12365E-006	1.12365E-006	0.00000E+000	0.00000E+000	1.11634E-006
Trenchers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.46467E-006	1.46467E-006	0.00000E+000	0.00000E+000	1.45516E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	5.00	PM2.5 Reduction	5.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Asphalt Paving & Off-Site Street Work	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Paving & Off-Site Street Work	Roads	0.01	0.00	0.00	0.00	0.07	0.07
Asphalt/Concrete Demo Debris Haul	Fugitive Dust	0.01	0.00	0.01	0.00	0.57	0.57
Asphalt/Concrete Demo Debris Haul	Roads	0.00	0.00	0.00	0.00	0.07	0.05
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.05	0.01	0.04	0.01	0.07	0.06
Building Demo Debris Haul	Fugitive Dust	0.01	0.00	0.00	0.00	0.57	0.57
Building Demo Debris Haul	Roads	0.00	0.00	0.00	0.00	0.06	0.06
Building Interiors	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Interiors	Roads	0.00	0.00	0.00	0.00	0.08	0.06
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	Roads	0.00	0.00	0.00	0.00	0.08	0.08
Grading	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Roads	0.00	0.00	0.00	0.00	0.08	0.07
Grading Soil Haul	Fugitive Dust	0.00	0.00	0.00	0.00	0.58	0.56
Grading Soil Haul	Roads	0.04	0.01	0.04	0.01	0.07	0.06

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.52	12.52	12.52	11.67	12.52
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	30.29	30.19	30.17	29.41	30.19	30.19	0.00	30.18	30.18	29.31	30.36	30.18
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	10.45	10.73	17.54	19.30	10.92
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.05	0.23		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	33.50	
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Ocean Charter School

Los Angeles-South Coast County, Mitigation Report

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Construction Localized Significance Thresholds: Demolition

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Grading

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction + Building Interiors

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Interiors

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	0.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625			0
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

0.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Asphalt Paving and Off-Site Street Work

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Asphalt Paving and Off-Site Street Work

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	1.00	25	82

Source Receptor	Southwest Coastal LA County	Equipment	Acres/8-hr Day	Acres/Hr	Equipment Used	Number of Hrs	Acres
Distance (meters)	25	Tractors	0.5	0.0625	2	8	1
NOx	**91**	Graders	0.5	0.0625			0
CO	**664**	Dozers	0.5	0.0625			0
PM10	**5.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	91	93	107	139	218
	1	91	93	107	139	218
		91	93	107	139	218
CO	1	664	785	1156	2228	7269
	1	664	785	1156	2228	7269
		664	785	1156	2228	7269
PM10	1	5	14	28	56	140
	1	5	14	28	56	140
		5	14	28	56	140
PM2.5	1	3	5	9	21	75
	1	3	5	9	21	75
		3	5	9	21	75

Southwest Coastal LA County

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	91	93	107	139	218
CO	664	785	1156	2228	7269
PM10	5	14	28	56	140
PM2.5	3	5	9	21	75

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	1	3	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Operation Localized Significance Thresholds

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
3	2.20	25	82

Source Receptor **Southwest Coastal LA County**

Distance (meters)	25
NOx	**135**
CO	**1,020**
PM10	**2.13**
PM2.5	**1.07**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	2	131	128	139	165	233
	3	153	148	160	184	248
		135	132	143	169	236
CO	2	967	1158	1597	2783	7950
	3	1234	1433	1934	3228	8584
		1020	1213	1664	2872	8077
PM10	2	2	6	9	16	36
	3	3	8	11	18	38
		2	6	9	16	36
PM2.5	2	1	2	3	6	20
	3	1	2	4	7	21
		1	2	3	6	20

Southwest Coastal LA County

2.20 Acres

	25	**50**	**100**	**200**	**500**
NOx	135	132	143	169	236
CO	1020	1213	1664	2872	8077
PM10	2	6	9	16	36
PM2.5	1	2	3	6	20

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
3	2	3	3
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2010 - Table C-1. 2006 – 2008

LOS ANGELES INTL AP, CALIFORNIA (045114)

Period of Record Monthly Climate Summary

Period of Record : 01/01/1936 to 01/20/2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	65.2	65.3	65.3	67.4	69.1	71.9	75.1	76.3	76.0	73.6	70.2	65.9	70.1
Average Min. Temperature (F)	47.5	48.9	50.5	53.0	56.4	59.7	62.9	63.8	62.6	58.5	52.3	47.9	55.3
Average Total Precipitation (in.)	2.65	2.67	1.85	0.77	0.17	0.05	0.02	0.07	0.16	0.39	1.40	1.82	12.02
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99% Min. Temp.: 99.6% Precipitation: 99.9% Snowfall: 93.5% Snow Depth: 97.1%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu