

Appendix C1
**Supplemental Air Quality and
GHG Emissions Technical
Memo (2018)**





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memorandum

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to City of Oceanside, Engineering Division

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subject Coast Highway Corridor Study Project – Supplemental Air Quality and Greenhouse Gas
 Emissions Technical Memorandum

Introduction

In February 2017, Environmental Science Associates (ESA) analyzed the potential air quality and greenhouse gas (GHG) effects of the City of Oceanside Coast Highway Corridor Project (proposed project, or project) and presented the results of the analysis in the 2017 Air Quality and Greenhouse Gas Emissions Technical Report, hereinafter referred to as the 2017 AQ/GHG Report (ESA 2017). Since the 2017 AQ/GHG Report, the project's 2017 Draft Traffic Impact Analysis (TIA) (IBI 2017) has been revised due to comments received from the California Department of Transportation (Caltrans) during the public comment period of the Draft Environmental Impact Report (EIR). The 2017 TIA evaluated the proposed project's roadway system assuming the buildout of the Vista Way/State Route (SR) 78 & Interstate (I) 5 Project, which included high-occupancy vehicle (HOV) lanes and ramps. Caltrans noted that the traffic modeling conducted for the 2017 TIA incorrectly assumed that improvements to the interchanges with I-5 would be built and operational in the future traffic scenarios. While this is currently in Caltrans' and the region's long-term plans, funding is not guaranteed with enough certainty to include the improvements in a CEQA-required future analysis scenario. Furthermore, Caltrans requested that additional intersections be included in the 2017 TIA's analysis.

In August 2018, IBI finalized a revised TIA (IBI 2018) for the proposed project in response to the Caltrans comments. The revised TIA added the analysis of the proposed project's roadway system without the buildout of the Vista Way/SR-78 & I-5 Interchange Project (i.e., it excludes HOV lanes and ramps). The revised TIA also includes the evaluation of additional intersections that were not analyzed in the 2017 TIA.

To consider the implications of these revisions and refinements to the TIA, this technical memorandum has been prepared to supplement the air quality and GHG analysis of the 2017 AQ/GHG Report.

Comparison of the Revised TIA to the 2017 TIA

As previously stated, the revised TIA remodeled the traffic scenarios per Caltrans comments to include the analysis of the proposed project's roadway system without the buildout of the Vista Way/SR-78 & I-5 Interchange Project and nine new intersections in addition to the 47 intersections evaluated in the 2017 TIA. The nine new intersections included in the revised TIA are:

48. Harbor/Vandergrift Boulevard & San Rafael Drive/I-5 Northbound (NB) On-Ramp

49. SR 76 & I-5 Southbound (SB) On-Ramp

50. SR 76 & I-5 NB On-/Off-Ramp

51. Mission Avenue & Pirates Cove Way/I-5 SB Off-Ramp

52. Oceanside Boulevard & I-5 SB On-/Off-Ramp

53. Oceanside Boulevard & I-5 NB On-/Off-Ramp

54. California Street & Soto Street/I-5 NB On-Ramp

55. Cassidy Street & I-5 SB On-Ramp/I-5 SB Off-Ramp

56. Vista Way & I-5 SB On-/Off-Ramp

In addition, ESA air quality and GHG specialists reviewed the revised TIA to determine whether any changes were made to the intersections evaluated in the 2017 TIA, which could substantially change the findings of the 2017 AQ/GHG Report. At the time the 2017 AQ/GHG Report was conducted, detailed construction activities and operational information in relation to the Incentive District were not available to quantify criteria pollutant and GHG emissions. The revisions made to 2017 TIA do not change the availability of this information. Therefore, this technical memorandum does not reevaluate the construction or operational impacts associated with implementation of the Incentive District. Furthermore, the revised TIA does not include additional construction activities to those evaluated in the 2017 AQ/GHG Report and, as such, no further construction analyses estimating air quality or GHG emissions are required to be conducted in this technical memorandum. Finally, the revised TIA does not change the findings of the 2017 AQ/GHG Report in regard to the applicability of current air quality plans, policies, or regulation adopted for the purpose of reducing the emissions of GHGs because the construction and operation of the project would still be required to adhere to these plans, policies, and regulations.

However, based on the review of the revised TIA, ESA air quality and GHG specialists identified two substantial changes from the 2017 TIA: (1) changes to the total peak hour traffic volumes at the intersections analyzed for the carbon monoxide (CO) hotspots analysis, and (2) changed information related to vehicle miles traveled (VMT) for the proposed project. These two issues have been re-analyzed in this technical memorandum based on the new information provided in the revised TIA.

Supplemental Analysis Approach

As stated above, the revised TIA resulted in two substantial changes to the traffic data presented in the 2017 TIA, which affects the analysis in the 2017 AQ/GHG Report. The two substantial changes include: (1) changes to the total peak hour traffic volumes at the intersections analyzed for the CO hotspots analysis and (2) changed information related to VMT for the proposed project. Therefore, this supplemental memorandum addresses the potential air quality and GHG impacts generated by the change in traffic volumes at the original intersections in addition to the nine new intersections as well as the changes to the VMT. This supplemental air quality and GHG analysis will determine whether any of the changed/new intersections result in exceedance of thresholds, and whether they result in a significant impact, when considered both alone and with all other cumulative projects. The significance thresholds used in this supplemental memorandum will be the same as those used in the 2017 AQ/GHG Report.

Supplemental Air Quality and GHG Analysis

This technical memorandum is consistent with the format and numbering system of the 2017 AQ/GHG Report, and only supplements and revises the applicable portions of the associated sections, shown below, of the 2017 AQ/GHG Report based on the revised TIA. The following analysis conclusions supersede the 2017 AQ/GHG Report's conclusions.

4.3 Project Impacts

Issue 2: Would the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

To assess the changes in VMT with implementation of the proposed project, the 2017 TIA compared VMT for the 2008 model year and Future 2035 without Project traffic scenario with the Future 2035 with Project traffic scenario. The 2017 TIA estimated 6.56 VMT per capita for the 2008 model base year and 7.11 VMT per capita under the Future 2035 without Project traffic scenario (IBI 2017). The 2017 TIA also estimated 6.36 VMT for the Future 2035 with Project traffic scenario, which represents a reduction of 3 percent and 11 percent, respectively (IBI 2017). Therefore, the 2017 TIA concluded that implementation of the proposed project would result in increased transportation efficiency on a per capita basis relative to the 2008 model base year and Future 2035 without Project conditions and would reduce per capita mobile source emissions. This reduction in per capita VMT is supportive of per capita VMT reduction efforts in the San Diego Association of Governments (SANDAG) 2050 Regional Transportation Plan/Sustainable Communities Strategy (2050 RTP/SCS).

Based on the new traffic modeling required for the revised TIA, the estimated VMT for the proposed project has changed. The revised TIA estimated 6.33 VMT per capita for the Future 2035 with Project, which is a 0.03 reduction from the VMT per capita estimated for the proposed project in the 2017 TIA. The revised TIA concluded that implementation of the proposed project would further reduce VMT per capita compared to the 2008 model base year (6.56 VMT per capita) and the Future 2035 without Project (7.11 VMT per capita) than what was previously included in the 2017 TIA (IBI 2018). Thus, VMT per capita would be reduced with the project compared to the 2008 model base year and the Future 2035 without Project traffic scenario by approximately 4 percent and 11 percent, respectively. Therefore, the proposed project would result in increased transportation efficiency on a per capita basis relative to the 2008 model base year and Future 2035 without

Project traffic scenario and would reduce per capita mobile source emissions. This reduction in per capita VMT is supportive of per capita VMT reduction efforts in the SANDAG 2050 RTP/SCS.

While VMT is estimated to be reduced with implementation of the proposed project, since detailed information regarding individual development projects within the Incentive District is not currently available, it cannot be determined with certainty that MM Incentive District AIR-2 would reduce impacts to a less than significant level. Additional feasible measures beyond the mitigation provided by MM Incentive District AIR-2 cannot be developed without knowing the exact nature of the proposed developments, including but not limited to the types and sizes of the proposed uses and associated trip generation rates. For these reasons, the operation of projects developed under the Incentive District would result in a potentially significant impact. As such, as determined in the 2017 AQ/GHG Report, the impact would remain *significant and unavoidable*.

Issue 3: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

CO Hotspots

As stated in the 2017 AQ/GHG Report, a project would expose sensitive receptors to substantial pollutant concentrations if it places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors. The project would result in a significant impact if the intersection improvements and realignment of trips associated with the Complete Streets improvements result in CO emissions that, when added to the ambient concentrations, would exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm. As summarized in Section 4.1 of the 2017 AQ/GHG Report, areas where CO 1-hour and or an 8-hour average concentration exceed the above stated standards have been found to occur where signalized intersections operate at or below a level of service (LOS) E (i.e., congested intersections) with peak-hour trips exceeding 3,000 trips. Therefore, as a screening level analysis, a project that would cause an intersection to be degraded below LOS D and would have peak-hour trips greater than 3,000 trips could have a potentially significant impact. If the intersection improvements do not exceed the screening levels, then they would be assumed to not exceed the 1-hour or 8-hour standards. However, if the intersection improvements degrade the LOS below D (change from LOS D or better to E, or LOS E to F) with peak hourly traffic flows of greater than 3,000 vehicles, additional analysis would be required to evaluate the potential significance.

A review of the traffic data for the Future (2035) Conditions with Project in the revised TIA identified eight intersections that would degrade the LOS below LOS D (change from LOS D or better to E, or LOS E to F). These results are shown in Table 8 (revised). While intersection 42 does not degrade in LOS between the Future (2035) with and without Project conditions, the delay time experienced at this intersection substantially increases with Project conditions. Therefore, due to this substantial increase in delay time, intersection 42 was also compared to the CO hotspot screening levels. Although the nine intersections would degrade under the Future (2035) with Project conditions, the intersections would not result in peak hourly flows that exceed 3,000 vehicles during the PM peak hours. Thus, the proposed project would not expose sensitive receptors to substantial concentrations of CO. As such, as determined in the 2017 AQ/GHG Report, impacts related to CO hotspots would remain *less than significant*.

TABLE 8 (REVISED)
TRAFFIC INTERSECTIONS LEVEL OF SERVICE – FUTURE (2035) + PROJECT

Intersection (Numbering per IBI 2018)	Peak Hour	Future Conditions without Project LOS	Future Conditions + Project LOS	Peak Hourly Flow
4. Coast Highway & Surfrider Way	AM	B	A	1,208
	PM	B	F	2,354
6. Coast Highway & Pier View Way	AM	B	A	796
	PM	A	E	2,049
15. Seagaze Street & Ditmar Street	AM	A	A	503
	PM	D	E	1,358
21. Coast Highway & Wisconsin Avenue	AM	B	A	1,070
	PM	C	F	2,136
26. Oceanside Boulevard & Tremont Street	AM	B	B	573
	PM	F	E	1,035
27. Coast Highway & Oceanside Boulevard	AM	C	B	1,313
	PM	C	F	2,762
29. Coast Highway & Morse Street	AM	B	B	1,272
	PM	C	F	2,447
35. Coast Highway & Cassidy Street	AM	B	A	1,187
	PM	C	F	2,539
42. Vista Way & Ditmar Street	AM	D	D	1,624
	PM	F	F	2,873

SOURCE: IBI 2018.

Appendix C2
**Air Quality and GHG Emissions
Technical Report (2017)**

Final

City of Oceanside Coast Highway Corridor Study Project

Air Quality and Greenhouse Gas Emissions Technical Report

Prepared for
City of Oceanside

February 2017



Final

City of Oceanside Coast Highway Corridor Study Project

Air Quality and Greenhouse Gas Emissions Technical Report

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City of Oceanside Coast Highway Corridor Study Project

Air Quality and Greenhouse Gas Emissions Technical Report

1. Introduction

This technical report addresses the potential impacts to air quality and climate change associated with the proposed Coast Highway Corridor Study Project (proposed project or project). The proposed project is composed of two major components: (1) the Complete Streets improvements and (2) the Coast Highway Incentive District (hereafter referred to as the Incentive District). The project is located primarily along the project segment of the Coast Highway Corridor and extends into the adjacent neighborhoods, all within the City of Oceanside, California. The project corridor consists of a variety of land uses, including primarily commercial and retail along Coast Highway, with surrounding residential, primarily one block (east and west) off of the Coast Highway corridor. It should be noted that when referring specifically to each project component, the terms “Complete Streets improvements” and “Incentive District” will be used to describe the individual areas, while the term “project area” will be used when referring to the combined area of both project components.

This analysis describes the existing air quality in the project area, identifies applicable rules and regulations, and evaluates potential short- and long-term air quality impacts associated with implementation of the project. Specifically, this technical report provides a quantitative analysis of potential air quality impacts associated with the Complete Streets improvements, and a programmatic analysis of the air quality impacts associated with future development that may fall under the Incentive District.

Additionally, this analysis provides background information on greenhouse gas (GHG) emissions and evaluates potential impacts associated with the project’s GHG contributions. Furthermore, where applicable, measures to mitigate or minimize air pollutants and GHG emissions associated with the project are included. Similar to the air quality analyses, this technical report provides quantitative and programmatic analyses of potential GHG impacts associated with the Complete Streets improvements and the Incentive District, respectively.

Information used to prepare this analysis was obtained from the City of Oceanside (City) General Plan, the County of San Diego (County) Guidelines for Determining Significance, the San Diego Association of Governments’ (SANDAG’s) Sustainable Communities Strategy (SCS), the project’s traffic study prepared by IBI Group (January 2017), and other sources identified herein.

This technical report is being prepared to support the environmental review process for the project under the California Environmental Quality Act (CEQA). The City is the proponent and the lead agency for the project.

2. Project Description

This section describes the project components of the Complete Streets improvements and Incentive District. The Complete Streets improvements are specific improvements to be constructed within the existing Coast Highway corridor in the near-term. The creation of the Incentive District would be based on the implementation of the Coast Highway Vision and Strategic Plan, amendments to the Zoning Ordinance for the Incentive District, and an amendment to the City's General Plan.

2.1 Complete Streets Improvements

The Coast Highway corridor currently operates with four travel lanes, two northbound and two southbound, with limited on-street parking and no designated bicycle facilities. The project would result in several changes along the 18.4-acre project corridor of the Coast Highway. The project would convert Coast Highway from four to two lanes throughout the corridor, with segments of two southbound travel lanes between State Route 76 (SR-76) and Surfrider Way, and south of Kelly Street to Eaton Street. The project would provide new roundabout intersections, on-street parking, continuous bicycle facilities, and streetscape improvements within the corridor.

The project would include the phased installation of roundabouts at 12 specific intersections, which are identified in the project Traffic Impact Analysis (TIA) along the Coast Highway corridor and are currently signalized or stop-sign controlled (IBI 2017). The proposed roundabouts would feature one lane in each direction with the exception of the roundabout at SR-76 and Coast Highway, which would consist of two lanes. Roundabouts are proposed along Coast Highway at the intersections with the following streets: SR-76, Surfrider Way, Civic Center Drive, Pier View Way, Michigan Avenue, Washington Avenue, Wisconsin Avenue, West Street, Oceanside Boulevard, Morse Street, Cassidy Street, and Kelly Street. All of these intersections are currently signalized, except for the intersections with Washington Avenue, West Street, and Kelly Street, which currently are stop-sign controlled (IBI 2017). In addition to the installation of roundabouts, the project would also provide ten mid-block crosswalks throughout the corridor to allow for various locations where pedestrians could safely cross Coast Highway.

The project would also add two-way left-turn lanes within the street segments of Coast Highway between Harbor Drive and SR-76 and Pier View Way and Seagaze Drive. Dedicated middle two-way left-turn lane would be added between SR-76 and Surfrider Way, Oceanside Boulevard and Morse Street, and Kelly Street and Vista Way. Street segments with improved raised medians without the ability to turn left would include Surfrider Way to Pier View Way, Seagaze Drive to Oceanside Boulevard, and Morse Street to Kelly Street. Additionally, the project would create continuous bicycle facilities throughout the Coast Highway corridor, starting at Harbor Drive and extending south past Eaton Street.

Construction of the Complete Streets improvements component of the project is anticipated to begin in January 2018 and be completed by December 2035, potentially over approximately an 18-year period. Construction of the project would be implemented in multiple phases, with each phase anticipated to construct a maximum of two roundabouts. The construction of a single roundabout is anticipated to occur over approximately 4 months. For the purpose of this air quality emissions analysis, a worst-case project emissions scenario was assumed consisting of two roundabouts constructed simultaneously over a 4-month period, from January 2018 to April 2018 (one phase). Since each phase is assumed to be identical, one air quality emissions analysis for a single phase is sufficient to represent the worst-case emissions in a day (i.e., pounds per day). Construction activities for a single phase are shown in Table 1. Construction activities are expected to occur from 7:00 a.m. to 6:00 p.m. Monday through Saturday, and no construction is anticipated on Sundays.

**TABLE 1
ANTICIPATED PROJECT CONSTRUCTION SCHEDULE (4-MONTH PHASE)**

Phases	Number of Workers (Maximum)	Start (month/date/year)	Finish (month/date/year)	Duration (Workdays)
Demolition	35	1/1/2018	1/15/2018	13
Site Prep (Vegetation grubbing/clearing)	25	1/16/2018	1/30/2018	13
Site Grading	30	1/31/2018	2/14/2018	13
Utility Trenching	10	2/15/2018	3/1/2018	13
Facilities Construction	56	3/2/2018	3/30/2018	25
Paving	60	3/31/2018	4/28/2018	25

SOURCE: ESA 2016.

Construction would require demolition and removal of portions of the existing asphalt paved areas. An estimated 3,000 cubic yards of demolished pavement would occur per phase, all of which would require export off-site. Hauling of demolition debris (pavement removed for roundabouts) for the first phase is expected to occur over approximately 13 days in January 2018. Heavy equipment, including large backhoes, excavators, graders, loaders, rollers, pavers, and haul trucks, would be used in the project area throughout the construction period. It is anticipated that the various construction phases associated with the Complete Streets improvements would, for the most part, occur in sequential order, where one phase would be completed and operational prior to the next phase beginning, as shown in Table 1 above. A maximum of 20 haul truck trips per day were assumed to haul demolition debris (i.e., removed pavement) during the respective phases.

2.2 Incentive District

The Incentive District would extend in an irregular shape from Seagaze Drive to the north past Eaton Street to the south, and extend from Ditmar Street on the east to Pacific Street on the west. The Incentive District would provide optional regulations and standards that a developer or property owner may choose in lieu of the existing underlying zoning. If adopted, the Incentive District would be an optional zoning program that individual developers could choose to apply for new development within the Incentive District boundary. Implementation of the Incentive District would require amendments to the City's existing General Plan and Zoning Ordinance. Since future projects that may fall under the Incentive District are unknown at this time, a programmatic analysis of the Incentive District is presented within this report.

3. Environmental Setting

3.1 Climate and Meteorology

The proposed project is located within the San Diego Air Basin (SDAB), which is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD). The SDAB is a 4,260-square-mile coastal plain that comprises the entire San Diego region, and is contiguous with the County boundary. The SDAB is geographically bounded by desert and mountain terrain to the north and east, Mexico to the south, and the Pacific Ocean to the west.

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east, and is defined by mesa tops intersected by canyon areas. The topography in the San Diego region, along with local meteorology, influences the dispersal and movement of pollutants in the basin. The mountains to the east prohibit dispersal of pollutants beyond them and help trap the pollutants in inversion layers.

The weather of the San Diego region is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers, and mild, somewhat wet, cool winters. The regional temperature ranges from lows in the mid-40 degrees Fahrenheit (°F) to highs in the high 90s °F. Most of the County's annual precipitation occurs from November to April, with infrequent (approximately 10 percent) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches, which increases with elevation, as the moist marine air is lifted over the mountains.

Based on recent climate records from the Western Regional Climate Center (WRCC) monitoring station located in the City (Oceanside Marina [ID No. 046377]), the average annual maximum temperature in the region is approximately 67.6 °F and the average annual minimum temperature is approximately 52.9° F.

The interaction of ocean, land, and the predominant Pacific High Pressure Zone maintains clear skies for much of the year and drives the prevailing winds. Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

In conjunction with the two characteristic onshore/offshore wind patterns, there are two types of temperature inversions (i.e., reversals of the normal decrease of temperature with height), which

occur within the region that affect atmospheric dispersive capability and act to degrade local air quality. In the summer, an inversion at approximately 1,100 to 2,500 feet is formed over the entire coastal plain, when the warm air mass over land is undercut by a shallow layer of cool marine air flowing offshore. The prevailing sunny days in the region further exacerbate smog by inducing additional adverse photochemical reactions. During the winter, a nightly, shallow inversion layer (usually at approximately 800 feet) forms between the cooler air at ground level and the warmer air above, which can trap air pollutants. The regional carbon monoxide (CO) concentrations are highest during the winter months.

The predominant onshore/offshore wind pattern is sometimes interrupted by “Santa Ana” conditions, when high-pressure systems over the Nevada-Utah area overcome the prevailing westerly winds, sending strong, steady, hot, and dry winds from the east over the mountains and out toward the Pacific Ocean. Strong Santa Ana winds tend to transport pollutants out over the ocean, producing clear days inland. However, at the onset or breakdown of these conditions, or if the condition is weak, prevailing northwesterly winds strengthen and transport an air mass of contamination from the Los Angeles Basin to the SDAB.

3.2 Federal and State Ambient Air Quality Standards

Ambient Air Quality Standards

Regulation of air pollution is achieved through federal and state ambient air quality standards and emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has identified criteria pollutants and has established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone (O₃), CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria. To protect human health and the environment, USEPA has set “primary” and “secondary” maximum ambient concentration limits for each of the criteria pollutants. Primary standards were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions like asthma and emphysema. Secondary standards were set to protect the natural environment and prevent damage to animals, crops, vegetation, and buildings.

Regional and Local

The NAAQS establish the concentration level for an air pollutant above which detrimental effects to public health or welfare may result. The NAAQS are defined as the maximum acceptable concentrations that, depending on the pollutant, may not be equaled or exceeded more than once per year or in some cases as a percentile of observations. California has generally adopted more stringent ambient air quality standards than the NAAQS for the criteria air pollutants (i.e., California Ambient Air Quality Standards [CAAQS]) and has adopted CAAQS for some pollutants for which there is no corresponding NAAQS, such as sulfates (SO₄), hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Both NAAQS and CAAQS for criteria air pollutants, along with their associated health effects and sources, are presented in Table 2.

**TABLE 2
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	No National Standard	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO _x react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial/industrial mobile equipment.
	8 hours	0.07 ppm	0.070 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Arithmetic Mean	0.030 ppm	0.053 ppm		
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	75 ppb	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	No State Standard	0.50 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Arithmetic Mean	No State Standard	0.03 ppm		
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	150 µg/m ³	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Arithmetic Mean	20 µg/m ³	No National Standard		
Fine Particulate Matter (PM _{2.5})	24 hours	No State Standard	35 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³		
Lead (Pb)	30 Day Average	1.5 µg/m ³	No National Standard	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	No State Standard	1.5 µg/m ³		
	Rolling 3-Month Average	No State Standard	0.15 µg/m ³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum production and refining
Sulfates (SO ₄)	24 hour	25 µg/m ³	No National Standard	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM _{2.5} .

NOTE: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

SOURCE: CARB 2016.

Criteria Air Pollutants

The California Air Resources Board (CARB) and USEPA currently focus on criteria air pollutants because they are the most prevalent air pollutants known to be injurious to human health, and extensive health-effects criteria documents are available about their effects on human health and welfare. A general description of these pollutants is provided below.

Ozone

O₃, the main component of photochemical smog, is primarily a summer and fall air pollution problem. O₃ is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds that are directly emitted, known as ozone precursors, which include reactive organic gases (ROGs), also known as volatile organic compounds (VOCs), and oxides of nitrogen (NO_x).

Carbon Monoxide

CO, a colorless and odorless gas, is a relatively non-reactive pollutant that is a product of incomplete combustion, mostly associated with motor vehicles. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s, when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, lower CO emissions from new vehicles, and improvements in fuels.

Nitrogen Dioxide

NO₂ is a reddish-brown gas that is a by-product of the combustion processes. Motor vehicles and industrial operations are the main sources of NO₂. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO₂. The combined emissions of NO and NO₂ are referred to as NO_x, which are reported as equivalent NO₂. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component of brown clouds on high-pollution days, especially in conjunction with high O₃ levels.

Sulfur Dioxide

SO₂ is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant, mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfur trioxide (SO₃). Collectively, these pollutants are referred to as sulfur oxides (SO_x).

Particulate Matter

PM₁₀ and PM_{2.5} consist of particulate matter (PM) that is 10 microns¹ or less in diameter and 2.5 microns or less in diameter, respectively. PM₁₀ and PM_{2.5} represent fractions of PM that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high PM levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of PM in the air. PM can also damage materials and reduce visibility. One common source of PM_{2.5} is diesel exhaust emissions.

PM₁₀ and PM_{2.5} consist of PM emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural wind-blown dust), and PM formed in the atmosphere by condensation and/or transformation of SO₂ and ROG. Traffic generates PM emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM₁₀ and PM_{2.5} are also emitted by the burning of wood in residential wood stoves and fireplaces, and open agricultural burning. PM_{2.5} can also be formed through secondary processes, such as airborne reactions with certain pollutant precursors, including ROGs, ammonia (NH₃), NO_x, and SO_x.

Lead

Pb is a metal found naturally in the environment and present in some manufactured products. The proposed project does not generate Pb emissions, thus Pb is not discussed further in this analysis.

Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs), or in federal parlance hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air mass; however, their high toxicity and/or health risk may pose a threat to public health even at low concentrations.

According to the California Almanac of Emissions and Air Quality (CARB 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being PM from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of diesel PM emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

¹ A micron is one-millionth of a meter.

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Offensive odors are unpleasant and can lead to public distress generating citizen complaints to local governments. Although unpleasant, offensive odors rarely cause physical harm. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed, direction, and the sensitivity of receptors.

3.3 Project Area Air Quality

Ambient air quality in San Diego County is measured through a system of monitoring stations established at various locations throughout the County, operated by the SDAPCD. The station nearest to the City is the Camp Pendleton Station located at 21441 West B Street on Marine Corps Base Camp Pendleton, approximately 0.5 miles north of the project area, within the coastal zone, and considered the most representative of the City's ambient air quality for the criteria pollutants. The latest available annual air quality data for these stations, 2013 through 2015, are provided in Table 3.

CO, SO₂, and PM₁₀ are not measured at the Camp Pendleton Station, or any other monitoring station within the project area that is representative of the project area's air quality conditions. Therefore, the measurements from these pollutants are not included in Table 3.

Both the CARB and USEPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic attainment designation categories are nonattainment, attainment, and unclassified. Unclassified is designated for an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California attainment designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment. The current attainment status for the SDAB is provided in Table 4.

**TABLE 3
AIR QUALITY DATA SUMMARY (2013-2015) FOR PROJECT AREA**

Pollutant	Monitoring Data by Year			
	Standard ^a	2013	2014	2015
Ozone				
Highest 1 Hour Average (ppm)		0.08	0.100	0.09
Days over State Standard	0.09 ppm	0	1	1
Highest 8 Hour Average (ppm)		0.07	0.08	0.08
Days over National Standard	0.075 ppm	0	1	1
Days over State Standard	0.070 ppm	0	5	3
Carbon Monoxide^d				
Highest 8 Hour Average (ppm)		*	*	*
Days over National Standard	9.0 ppm	*	*	*
Days over State Standard	9.0 ppm	*	*	*
Nitrogen Dioxide				
Highest 1 Hour Average (ppm)		0.081	0.060	0.060
Days over National Standard	0.100 ppm	0	0	0
Days over State Standard	0.18 ppm	0	0	0
Annual Average (ppm)		*	0.007	0.007
Days over National Standard	0.053 ppm	0	0	0
Days over State Standard	0.030 ppm	0	0	0
Sulfur Dioxide^d				
Highest 24 Hour Average (ppm)		*	*	*
Days over State Standard	0.04 ppm	*	*	*
Particulate Matter (PM₁₀)^d				
Highest 24 Hour Average (µg/m ³) ^b		*	*	*
Days over National Standard (measured) ^c	150 µg/m ³	*	*	*
Days over State Standard (measured) ^c	50 µg/m ³	*	*	*
Annual Average (µg/m ³) ^b	20 µg/m ³	*	*	*
Particulate Matter (PM_{2.5}) –				
Highest 24 Hour Average (µg/m ³) ^b		42.3	28.0	41.2
Days over National Standard (measured) ^c	35 µg/m ³	1	0	*
Annual Average (µg/m ³) ^b	12 µg/m ³	8.5	*	*

ppm = parts per million; µg/m³ = micrograms per cubic meter.

* = Insufficient data available to determine the value.

^a Generally, state standards and national standards are not to be exceeded more than once per year.

^b Concentrations and averages represent federal statistics. State and federal statistics may differ because of different sampling methods.

^c Measurements are usually collected every six days. Days over the standard represent the measured number of days that the standard has been exceeded.

^d Pollutant not monitored at air monitoring site representative of project area.

SOURCE: SDAPCD 2016a.

**TABLE 4
SAN DIEGO AIR BASIN ATTAINMENT STATUS**

Pollutant	Attainment Status	
	California Standards	Federal Standards
O ₃ – 1 hour	Non-attainment	No Federal Standard
O ₃ –8 hours	Non-attainment	Non-attainment
CO	Attainment	Unclassified/Attainment
NO ₂	Attainment	Unclassified/Attainment
SO ₂	Attainment	Attainment
PM ₁₀	Non-attainment	Unclassified
PM _{2.5}	Non-attainment	Unclassified/Attainment
Pb	Unclassified/Attainment	Unclassified/Attainment

SOURCE: SDAPCD 2016b.

3.4 Sensitive Receptors

Air-quality-sensitive receptors are individuals who are considered more sensitive to air pollutants than others. The reasons for greater-than-average sensitivity may include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air-quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because, in general, people are at their residences for extended periods of time, with greater exposure time to poor ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to poor ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system, resulting in inhaling more pollutants and aggravating respiratory conditions.

Currently, sensitive receptors located in the project area include Oceanside High School, Saint Mary Star of the Sea Elementary and Middle School, Santa Margarita Elementary School, South Oceanside Elementary School, and Naval Hospital Camp Pendleton, all of which are within 0.5 miles from the project area. The nearest sensitive receptors include various single-family and multi-family residential homes adjacent to the 3.5-mile Coast Highway corridor.

3.5 Background on Greenhouse Gases and Climate Change

This section provides background setting information specific to GHG emissions and their effect on global climate change. GHGs are those compounds in the Earth’s atmosphere which play a critical role in determining temperature near the Earth’s surface. Specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth’s atmosphere, but retain some of the low-frequency infrared energy that is radiated back from the Earth toward space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect.

The major concern with GHGs is increasing GHG concentrations in the atmosphere and the correlation with global climate change. Increased concentrations of GHGs in the Earth's atmosphere, attributed by the Intergovernmental Panel on Climate Change (IPCC) to anthropogenic activities (IPCC 2014), have been linked to global climate change and subsequent conditions such as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions. Existing climate change models also show that climate warming portends a variety of impacts on agriculture, including loss of microclimates that support specific crops, increased pressure from invasive weeds and diseases, and loss of productivity due to changes in water reliability and availability. In addition, rising temperatures and shifts in microclimates associated with global climate change are expected to increase the frequency and intensity of wildfires. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most in the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

The GHGs regulated under state law are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different GHGs have different warming potential, and CO₂ is the most common reference GHG for climate change, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). Large emission sources are reported in million metric tons (MMT) of CO₂e.²

Some of the potential effects of global warming specifically in California may include loss in snow pack, sea-level rise, more days of extreme heat per year, more days of high O₃ levels due to increased temperatures, more drought years, and more forest fires (CARB, 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns.

3.6 Air Quality and GHG Regulatory Setting

Federal

The principal air quality regulatory mechanism at the federal level is the CAA, and in particular, the 1990 amendments to the CAA and the NAAQS that it establishes. The NAAQS identify the maximum ambient (background) concentration levels of criteria pollutants that are considered to be safe, with an adequate margin of safety, to protect public health and welfare. As discussed previously, the criteria pollutants include O₃, CO, NO₂ (which is a form of NO_x), SO₂ (which is a form of SO_x), PM₁₀, PM_{2.5}, and Pb.

The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). The CAA Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional

² A metric ton is 1,000 kilograms; it is equal to approximately 1.1 U.S. tons and approximately 2,204.6 pounds.

agencies. USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs will achieve air quality goals. USEPA's primary role at the state level is to oversee the state air quality programs. USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

The federal CAA does not specifically regulate GHG emissions; however, the U.S. Supreme Court has determined that GHGs are pollutants that can be regulated under the federal CAA. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆). The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the Clean Air Act consistent with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. There are currently no federal regulations that set ambient air quality standards for GHGs. However, in August 2012, the USEPA adopted vehicle emissions standards for GHGs for model year 2017 through 2025 passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile.

State

California Air Resources Board

CARB, a department of the California Environmental Protection Agency (Cal/EPA), oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 Amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements, and regulating emissions from motor vehicles sold in California. CARB also sets fuel specifications to further reduce vehicular emissions.

The CCAA established CAAQS, and a legal mandate to achieve these standards by the earliest practical date. CAAQS apply to the same criteria pollutants as the federal CAA, and also include sulfates, visibility reducing particulates, hydrogen sulfide and vinyl chloride. CAAQS are also generally more stringent than the NAAQS.

CARB is also responsible for regulations pertaining to TACs. The Air Toxics "Hot Spots" Information and Assessment Act was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. Assembly Bill (AB) 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release.

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled

commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008, CARB also approved the Truck and Bus regulation to reduce PM and NO_x emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). The requirements were amended to apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. This regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_x and PM by 2023.

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with large fleets beginning compliance in 2014, medium fleets in 2017, and small fleets in 2019. Full compliance is required by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then Governor Arnold A. Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

Executive Order S-1-07

Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020. As a result of this order, CARB approved a proposed regulation to implement the low-carbon fuel standard on April 23, 2009, which will reduce GHG emissions from the transportation sector in California by about 16 MMT in 2020.

Executive Order B-30-15

California Governor Edmund G. Brown issued on April 29, 2015, through Executive Order B-30-15, the following GHG emission reduction target:

- By 2030, California shall reduce GHG emissions to 40 percent below 1990 levels.

California Global Warming Solutions Act

California AB 32, codified under Health and Safety Code (HSC) Division 25.5 and referred to as the California Global Warming Solutions Act of 2006, requires CARB to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt and enforce programs and regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions. In December 2007, CARB adopted 427 MT CO₂e as the statewide GHG emissions limit equivalent to the statewide levels for 1990. This is approximately 28 percent below forecasted 2020 “business-as-usual” (BAU) emissions of 596 MMT of CO₂e, and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB 2009b). In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the state’s strategy to achieve the 2020 GHG emissions limit (CARB 2009b). This Scoping Plan, developed by CARB in coordination with the Climate Action Team, proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California’s energy sources, save energy, create new jobs, and enhance public health.

The first update to the AB 32 Scoping Plan was approved on May 22, 2014, by CARB. As part of the proposed update to the Scoping Plan, the emissions reductions required to meet the 2020 statewide GHG emissions limit were further adjusted. CARB recalculated the Scoping Plan’s 1990 GHG emissions level, which resulted in 431 MMT of CO₂e, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 MMT of CO₂e in the initial Scoping Plan. Considering that the proposed update also adjusted the 2020 BAU forecast of GHG emissions to 509 MMT of CO₂e, a 15 percent reduction below the estimated BAU levels was determined to be necessary to return to 1990 levels by 2020 (CARB 2014). With the passage of SB 32, CARB is in the process of preparing the second update to the Scoping Plan to reflect the 2030 target established in Executive Order B-30-15 and SB 32.

Senate Bill 375

Senate Bill (SB) 375, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets that had been

developed in consultation with the metropolitan planning organizations (MPOs). The targets require a 7 to 8 percent reduction by 2020 and between 13 to 16 percent reduction by 2035 for each MPO. The San Diego Association of Governments (SANDAG) 2050 Regional Transportation Plan (RTP) and its Sustainable Communities Strategy (SCS) reduction target for per capita vehicular emissions is 7 percent by 2020 and 13 percent by 2035 (SANDAG 2011).

Senate Bill 97

SB 97, enacted in August 2007, required the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions, or the effects related to releases of GHG emissions. On April 13, 2009, the OPR submitted proposed amendments to the Natural Resources Agency in accordance with SB 97 regarding analysis and mitigation of GHG emissions. As directed by SB 97, the Natural Resources Agency adopted amendments to the CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

Title 24, Building Standards Code and CALGreen Code

The California Energy Commission first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality.” The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. When the CALGreen Code went into effect in 2009, compliance through 2010 was voluntary. As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017.

Renewables Portfolio Standard

On April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's Renewables Portfolio Standard to 33 percent by 2020. SB 350 (Chapter 547, Statutes of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

Regional

Sustainable Communities Strategies

SANDAG adopted the 2015 SCS in October 2015, which builds on the previous 2011 SCS and directs investments within existing urbanized areas to encourage growth within existing higher-density urban boundaries and discourage urban and suburban sprawl. Elements of the 2011 SCS that have been implemented include the completion of bicycle and pedestrian projects and the expansion of transit with new rapid bus service. The goals of the 2015 SCS include increasing the number of homes and jobs near transit, reducing transit travel time, and achieving economic benefits due to reduced congestion and the construction of transportation infrastructure, as well as reducing air pollutant emissions.

San Diego Air Pollution Control District

SDAPCD is the agency responsible for protecting the public health and welfare in the SDAB (i.e., the County) through the administration of federal and state air quality laws and policies. Included in SDAPCD's tasks are the monitoring of air pollution, the preparation of the County's portion of the SIP, and the promulgation of rules and regulations. The SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the SDAB (i.e., the County); this list of strategies is called the San Diego Regional Air Quality Strategy (RAQS) (SDAPCD 2009). The rules and regulations include procedures and requirements to control the emission of pollutants and prevent significant adverse impacts.

The following SDAPCD rules and regulations apply to new construction:

- Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.
- Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site.
- Regulation IV: Prohibitions; Rule 67.0: Architectural Coatings. Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOCs emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- Regulation XII: Prohibitions, Rule 1200: Toxic Air Contaminants –Requires stationary sources to be equipped with applicable Toxic Best Available Control Technology (BACT) if the maximum incremental Cancer Risk is found to be greater than one in one million. With implementation of applicable BACT’s, SDAPCD allows an incremental Cancer Risk less than ten in one million. According to SDAPCD’s *New Source review Requirements for Best Available Control Technology (BACT) Guidance Document (SDAPCD, 2011)*, the following applicable BACTs would apply to the project in respect to off-road construction equipment:
 - California use Clean Diesel fuel and Turbocharger, Low Temperature Aftercooler, and Retardation of Fuel Injection Timing 4 Degrees from manufacturer’s specification, USEPA or CARB certified engine and PCV filter.

The RAQS contains six Transportation Control Measures that are consistent with program commitments made in the 2007 Regional Transportation Plan (RTP) and the 2006 Regional Transportation Improvement Program (RTIP) adopted and implemented by SANDAG. The six RAQS Transportation Control Measures relate to: (1) Transit Improvements; (2) Vanpools; (3) High-Occupancy Vehicle (HOV) Lanes; (4) Park-and-Ride Facilities; (5) Bicycle Facilities; and (6) Traffic Signal Improvements. SDAPCD’s Indirect Source Program, adopted by the District Board in December 1997, consists of ongoing outreach and assistance to local governments, land developers, and neighborhood groups to reduce vehicle trips and associated emissions through voluntary land use and street design improvements (i.e., “smart growth”) (SDAPCD 2009).

SDAPCD provides ongoing technical assistance to SANDAG on programs to encourage smart growth. SDAPCD has also conducted public workshops and other forms of public outreach focused on improving the conditions for pedestrians, bicyclists, and transit.

Oceanside Climate Action Element

In October 2016, the City held two public workshops on the City’s General Plan Update, which includes development of a Climate Action Element (E-CAP). The purpose of the E-CAP planning effort is to identify how the City can do its part to achieve State GHG emission reduction goals, provide measures for the City to mitigate its GHG emissions impact, and establish a method to determine whether future actions, such as approval of development projects, are consistent with the GHG emission reduction goals. The E-CAP shall establish goals, objectives, and policies that move the City toward a sustainable future (e.g. improved energy efficiency, expanded renewable energy use, reduced greenhouse gas emissions, and adaptation to the anticipated impacts of climate change). The final E-CAP is anticipated to be released in 2018.

4. Impacts and Mitigation Measures

This section describes the air quality and GHG impact analysis for the proposed project, including the significance criteria, analysis methodologies and thresholds used in the analysis, the assessment of impacts, and any required mitigation measures for impacts that are considered potentially significant. The significance criteria are applicable to both the Complete Streets improvements and Incentive District components of the proposed project.

4.1 Significance Criteria

Consistent with Appendix G of the CEQA Guidelines, the project would result in a significant impact on air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Create objectionable odors affecting a substantial number of people.
5. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
6. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
7. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Air Quality – Criteria Pollutants

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments (AQIA) for permitted stationary sources. The SDAPCD sets forth quantitative emission thresholds below which a source would not have a significant impact on ambient air quality. It does not provide PM₁₀ and PM_{2.5} thresholds. Because SDAPCD does not provide PM₁₀ or PM_{2.5} thresholds, this analysis also considers the San Diego County guidelines, which provide these screening thresholds for these pollutants (County of San Diego 2007). Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 5 would be exceeded.

CO Hotspots

Areas where CO concentrations exceed the NAAQS and/or CAAQS have been found to occur where signalized intersections operate at or below a level of service (LOS) E (i.e., congested intersections) with peak-hour trips exceeding 3,000 trips. Therefore, as a screening level analysis, a project that would cause an intersection to be degraded to below LOS D and would have peak-hour trips greater than 3,000 trips could have a potentially significant impact. In the screening level analysis determines a potentially significant impact, more detailed technical analyses are typically required, specifically local CO dispersion modeling.

**TABLE 5
SCREENING LEVEL THRESHOLDS**

Pollutant	Mass Daily Thresholds (lbs/day)	Mass Annual Thresholds (tons/year)
Oxides of Nitrogen (NO _x)	250	40
Reactive Organic Gases (ROG)	75	12.5
Respirable Particulate Matter (PM ₁₀)	100	15
Fine Particulate Matter (PM _{2.5})	55	10
Oxides of Sulfur (SO _x)	250	40
Carbon Monoxide (CO)	550	100

SOURCE: SDAPCD 1998, and County of San Diego 2007.

TAC Health Risks

The latest 2015 guidance from the Office of Environmental Health Hazard Assessment (OEHHA 2015) was used to evaluate whether future operations at the project site would expose residents and workers to significant health risks. Health risks associated with TAC exposure fall into three categories: acute, chronic, and carcinogenic. Acute and chronic health risks consist of non-cancer health effects. Acute health risks are associated with exposures ranging from 1 to 8 hours. Chronic health risks are associated with exposures of 1 year or more. Carcinogenic health risks are associated with long-term exposures ranging from 25 to 70 years.

According to the County Guidelines and SDAPCD’s Regulation XII: Prohibitions, Rule 1200: Air Contaminants, an incremental cancer risk greater than one in one million without implementation of BACTs, or greater than ten in one million with the application of BACTs, is a significant impact (SDAPCD 2015). In addition, a health hazard index greater than 1 would be deemed as having a potentially significant impact.

Odors

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

GHG Emissions

The increased concentration of GHGs in the atmosphere has been linked to global warming, which can lead to climate change. Construction and operation of the project would incrementally contribute to GHG emissions along with past, present, and future activities, and the CEQA Guidelines acknowledge this as a cumulative impact. As such, impacts of GHG emissions are analyzed here on a cumulative basis.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SDAPCD does not have quantitative thresholds for determining significance of construction or operational impacts. However, the County of San Diego provides guidance and thresholds for air quality analysis in their *County of San Diego 2015 GHG Guidance: Recommended Approach to Addressing Climate Change in CEQA Documents* (County of San Diego 2015). A screening threshold of 900 MT of CO₂e per year is being used by the County as a conservative criterion for determining the size of projects that would require further analysis and mitigation with regard to climate change. This screening threshold would achieve the State's objective of capturing 90 percent of the GHG emissions from new development projects in the residential/commercial sectors. If a project were to exceed the 900 MT of CO₂e per year threshold, the project would have a cumulatively considerable impact.

For significance threshold 5, the annual threshold of 900 MT of CO₂e proposed by the County will be used as a screening level for determining the significance of the project's GHG emissions.

For significance threshold 6, a project is determined to be less than significant if it does not conflict existing plans or policies implemented for the reduction of GHG emissions.

4.2 Methodology

Construction Air Quality Impacts of the Complete Streets Improvements

Air pollutant emissions associated with the Complete Streets improvements would result from construction activities that would generate air pollutant emissions in the project area, and on surrounding roadways resulting from construction-related traffic. Short-term construction-generated emissions of criteria air pollutants and O₃ precursors associated with the Complete Streets improvements were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.1, as recommended by SDAPCD. CalEEMod was used to determine whether short-term construction-related emissions of criteria air pollutants associated with the Complete Streets improvements would exceed the thresholds previously identified, and whether mitigation would be required. The modeling was based on project-specific construction data provided by the City, where available. Where project-specific information was not available, reasonable assumptions based on other similar projects and default model settings were used to estimate criteria air pollutant and O₃ precursor emissions. Modeling input and output files are provided in Appendix A of this report.

Construction emissions are considered short term and temporary, but have the potential to represent a significant impact with respect to air quality. PM (i.e., PM₁₀ and PM_{2.5}) is among the pollutants of greatest localized concern with respect to construction activities. PM emissions from construction activities can lead to adverse health effects and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. PM emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Construction emissions of PM can vary greatly depending on the level of activity, the specific operations taking place, the number and types of

equipment operated, local soil conditions, weather conditions, and the amount of earth disturbance.

Mobile source emissions generate primarily O₃ precursors of ROG and NO_x emissions, which vary as a function of vehicle trips per day associated with debris hauling, delivery of construction materials, vendor trips, and worker commute trips, and the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation.

All construction projects in the SDAB must comply with SDAPCD Rule 55 for controlling fugitive dust, which would reduce regional PM₁₀ and PM_{2.5} emissions from construction activities. Specific Rule 55 control requirements include dust control measures for active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site. Compliance with Rule 55 was accounted for in the project construction emissions modeling. Site watering would reduce the PM from becoming airborne, while washing of transport vehicle tires and undercarriages would reduce re-entrainment of construction dust onto the local roadway network.

Construction Air Quality Impacts of Projects Constructed under the Incentive District

Construction activities that would occur as a result of individual development and redevelopment projects implemented under the Incentive District have the potential to generate air pollution emissions as a result of potential future use of heavy-duty construction equipment, and future vehicle trips generated from construction workers traveling to and from construction sites. In addition, potential fugitive dust emissions would result from grading and construction activities and evaporative emissions would occur from the application of architectural coatings and the laying of asphalt pavement.

Specific future development projects, which may fall under the Incentive District, are unknown at this time. As a result, specific future project-level construction information, such as construction schedules and import and export soil quantities are not known. For the purposes of conducting an construction emissions impact assessment of projects constructed under the Incentive District provisions, an evaluation of the consistency with applicable CARB and SDAPCD measures to reduce construction-related emissions from the combustion of fossil fuels and the generation of fugitive dust is included in this analysis. The analysis also assesses consistency with construction measures in the San Diego County Air Quality Management Plan (AQMP). However, as future project-specific information of Incentive District development is not available at this time so this aspect of the project is addressed programmatically.

Operational Air Quality Impacts of the Project

The operation of the Complete Streets improvements would not result in an increase in vehicle trips or other secondary sources. Therefore, the Complete Streets improvements would not result in significant operational air quality impacts and are not further discussed in this analysis.

The operation of the Incentive District developments, once constructed, would potentially generate operational air pollutant emissions from mobile source and area source emissions and indirect sources of pollutant emissions associated electricity and natural gas consumption, water transport, and solid waste generation at the project-level. Because individual development projects that could be implemented as a result of adoption of the Incentive District have not been identified, proposed, or designed, it is not possible to accurately quantify the potential pollutant emissions associated with these individual projects. Thus, potential future operations-related air pollution emissions impacts are qualitatively assessed, including evaluating consistency with applicable CARB and SDAPCD measures to reduce operations-related emissions, and qualitatively assessing consistency with construction measures in the AQMP.

Development in the Incentive District area could also result in long-term increase in the use of TAC-containing products (fuels, maintenance products, etc.) and/or substantially contribute to increased TAC emissions from existing localized TAC sources. These TAC issues are also addressed in this analysis through the consideration of measures that would be implemented during the development permit review process to ensure potential significant TAC impacts would not occur.

Greenhouse Gas Emission Impacts of the Project

GHG emissions of the project's Complete Streets improvements were estimated using a similar methodology to that described above for criteria air pollutants. CalEEMod is also used for estimating construction and operational GHG emissions associated with land use projects. CalEEMod Version 2016.3.1 incorporates the most recent (2014) versions of the on-road vehicle emission factors (EMFAC) and the off-road emission factors (OFFROAD) models developed by CARB. CalEEMod estimates the GHG emissions of CO₂, CH₄, and N₂O as well as the resulting total CO₂e emissions associated with construction-related GHG sources such as off-road construction equipment, material delivery trucks, soil haul trucks, and construction worker vehicles. CalEEMod Version 2016.3.1 uses IPCC's AR4 to assign the GWPs for CH₄ and N₂O; therefore, GHG emissions estimated by CalEEMod are consistent with the GWPs used for the State's GHG emission inventories. For consistency, the GHG analysis incorporates assumptions similar to the air quality analysis. The total construction GHG emissions for the project were amortized (distributed) each year over a 30-year period (life-time of the project) and added to its annual operational GHG emission estimates (which are zero, as the improvements do not generate operational emissions). All GHG emission estimate assumptions and calculations are provided in Appendix A to this report.

Construction activities of the projects that could be constructed under the Incentive District provisions have the potential to generate future GHG emissions, as a result of the same construction activities previously identified for air quality emissions. The operation of the development projects that could be built under the Incentive District provisions would generate GHG emissions from mobile source and area sources, and indirect GHG sources associated with electricity and natural gas consumption, water transport, and solid waste generation at the project level. However, as future project-specific information of Incentive District development is not available at this time so this aspect of the project is addressed programmatically.

4.3 Project Impacts

Air Quality Emissions

Issue 1: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

The SDAPCD RAQS is the regional air quality plan that is applicable the project area. The RAQS contains rules and regulations that are implemented by the SDAPCD to help the SDAB meet the clean air standards required by federal and state law. The RAQS relies on projected growth in the County as well as mobile, area, and other sources of emissions, as obtained from CARB and SANDAG to project future emissions within the County. Based on these emissions, reduction strategies are determined to reduce emissions in order to achieve or maintain attainment with state and federal standards. CARB mobile source emissions projections and SANDAG growth projections are generally based on the applicable General Plans (of the incorporated cities within the County and the County itself for the unincorporated areas). Therefore, projects that propose development consistent with the applicable General Plan would be consistent with the RAQS and the SIP. If the project's growth exceeds the projections anticipated in the applicable General Plan, then it would conflict with the RAQS and the SIP.

The Complete Streets improvements are a permitted use under the County's General Plan. Additionally, there is not expected to be population growth resulting from implementation of the Complete Streets improvements. Therefore, this component of project would be consistent with the growth projections accounted for in SDAPCD's RAQS, and it would not conflict with, or obstruct, implementation of the RAQS and impacts would be less than significant.

Construction emissions associated with the individual development projects that would occur under the Incentive District would be required to comply with the CARB promulgated emission standards for off-road diesel construction equipment, which would minimize exhaust emissions of PM₁₀, PM_{2.5}, and NO_x. As well, the growth and development that is anticipated to occur with implementation of the Incentive District is consistent with the City's existing General Plan and thus would be consistent with the SDAPCD's RAQS.

For these reasons, neither the Complete Streets improvements nor the development projects anticipated under the Incentive District would conflict with, or obstruct, implementation of the RAQS and impacts would be less than significant.

Issue 2: Would the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Complete Streets Improvements

The Complete Streets improvements would involve the conversion of the Coast Highway corridor from four lanes to two lanes, and phased construction of 12 new roundabout intersections, all of which are currently signalized, with the exception of the intersections with Washington Avenue, West Street, and Kelly Street, which currently are stop-sign controlled (IBI 2017). Construction

activities associated with the project would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, and utility trenching; construction workers traveling to and from project area; delivery and hauling of construction supplies to, and debris from, the project area; fuel combustion by on-site construction equipment; facilities construction; and paving. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The amount of emissions generated on a daily basis would vary depending on the intensity and types of construction activities occurring simultaneously at the time.

For the analysis of construction-period impacts for the Complete Streets improvement, the City of Oceanside estimated an inventory of the equipment that would be used during the peak day for each of the construction phases (e.g., demolition, site preparation, etc.). Using this data, the peak daily emissions of criteria air pollutants and O₃ precursors associated with the Complete Streets improvements worst-case construction scenario was modeled. The results of this analysis are provided in Table 6.

As shown in Table 6, the maximum daily construction emissions generated by the Complete Streets improvements worst-case construction scenario would not exceed SDAPCD’s daily thresholds for any criteria pollutants during any of the construction phases. Because construction activities would likely be lower than the maximum daily levels shown on most days, and would be intermittent throughout the year, the annual construction emissions generated by the Complete Streets improvements worst-case construction scenario would also not exceed SDAPCD’s annual thresholds. Therefore, the construction phase emissions of associated with the Complete Streets improvements project component would be less than significant.

**TABLE 6
COMPLETE STREETS IMPROVEMENTS CONSTRUCTION EMISSIONS**

Construction Activities	Estimated Maximum Daily Emissions (lbs/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	6	51	42	<1	3	3
Site Prep (Vegetation Grubbing/clearing)	3	39	23	<1	2	1
Site grading	3	33	22	<1	2	1
Utility Trenching	2	17	13	<1	1	1
Facilities construction	4	40	29	<1	3	2
Facilities construction and Paving ^a	9	83	62	<1	5	4
Maximum Daily Emissions	9	83	62	<1	5	4
SDAPCD Thresholds	75	250	550	250	100	55
Significant Impact?	No	No	No	No	No	No

^a Includes the sum of daily emissions from the construction phases Building Construction, Paving, and Architectural Coating, because these phases have the potential to overlap on the same day during the overall construction period. Consequently, the sum of these daily emissions represents the maximum daily emissions during the construction period; therefore, it is used as comparison to the SDAPCD screening-level thresholds.

SOURCE: ESA CalEEMod Modeling, August 2016; San Diego County Guidelines for Determining Significance 2007.

Operation of the Complete Streets improvements is not expected to result directly in an increase in emissions. According to the TIA prepared for the project (IBI 2017), the Complete Streets improvements are not expected to result in any net increases in vehicle trips when compared to existing baseline conditions. Therefore, operation of the Complete Streets improvements would result in no impacts.

Incentive District

Construction of Projects Implemented under the Incentive District

Future project-specific construction activities that would occur as a result of the Incentive District would cause temporary, short-term emissions of nonattainment air pollutants in the SDAB of O₃ precursors (i.e., VOCs and NO_x), and PM₁₀ and PM_{2.5} as a result of construction activities, including: (1) grading, excavation, road building, and other earth moving activities; (2) travel by construction equipment and employee vehicles, especially on unpaved surfaces; (3) exhaust from construction equipment, trucks, and worker vehicles; (4) architectural coatings; and (5) asphalt paving. Information regarding the size, duration, and construction requirements of specific development projects would be required in order to quantify impacts associated with the construction activities of these individual projects. However, what is known at this time is that the construction of potential future projects under the Incentive District would be required to comply with applicable State and SDAPCD air quality regulations, including CARB's on-road and off-road vehicle rules on idling limits and meeting stringent NO_x, PM₁₀, and PM_{2.5} exhaust standards; and SDAPCD Rules 55 and 51 (Fugitive Dust and Nuisance) that limit fugitive dust emissions. Additionally, the maximum residential density in the Incentive District would allow for 65 dwelling units per acre. Retail and commercial uses would also be allowed within the Incentive District.

Individual development projects could exceed the SDAPCD thresholds specified for daily emissions of criteria air pollutants (see Table 5). Thus, even with compliance of these rules and regulations, future construction activities associated with the land uses permitted by the Incentive District would have the potential to contribute substantially to an existing or projected air quality violation. Therefore, this impact would be potentially significant.

To reduce the potential for significant impacts, the following mitigation measures would be required for individual projects developed using the Incentive District regulations.

MM Incentive District AIR-1a: Prior to the issuance of a grading or building permit, whichever is required to be obtained first, individual development projects proposed under the Incentive District shall comply with the following land preparation, excavation, and/or demolition mitigation measures during construction activities:

- All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.

- All clearing, grading, earth moving and excavation activities should cease: (a) during periods of winds greater than 20 mph (averaged over one hour as measured by an on-site anemometer or an off-site anemometer that is representative of the construction area), if disturbed material is easily windblown, or (b) when visible dust plumes impact public roads, occupied structures or neighboring property.
- Vehicles traveling over unpaved roadways shall be limited to 15 miles per hour or less. Signs shall be posted at construction sites identifying the maximum speed limit.
- All trucks hauling dirt, sand, soil, or other loose material shall be covered or maintain at least 2 feet or freeboards, in accordance with the requirements of California Vehicle Code (CVC) Section 23114.
- If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul truck access points shall be equipped with a gravel pad, rumble pad, or similar control to reduce vehicle trackout.
- Adjacent streets with visible dust, dirt, sand, or soil material accumulation shall be cleaned and the accumulated material removed using street sweepers.
- Stockpiles of soil or other fine loose material shall be stabilized by watering, covered with tarp, or other appropriate method to prevent wind-blown fugitive dust.
- Where acceptable to the local fire department, weed control should be accomplished by mowing instead of digging, thereby, leaving the ground undisturbed and with a mulch covering.

MM Incentive District AIR-1b: Prior to the issuance of a grading or building permit, whichever is required to be obtained first, individual proposed projects shall comply with the following construction equipment mitigation measures:

- Construction equipment, on-road trucks, and emission control devices shall be properly maintained and tuned in accordance with manufacturer specifications.
- Construction contractors shall be required to comply with California's on-road and off-road vehicle emissions regulations, including the CARB idling restrictions and the USEPA/CARB on-road and off-road diesel vehicle emissions standards, as required by 13 CCR, Sections 2485, 2025(h), and 2449.

MM Incentive District AIR-1c: Construction contractors shall ensure that interior architectural coatings have a maximum of 10 grams per liter of VOC for both residential and commercial development.

While implementation of **MM Incentive District AIR-1a through 1c** represents feasible measures to reduce potential impacts associated with construction, impacts would not be reduced to a less-than-significant level. Additional feasible measures cannot be developed without knowing the exact timing or location of the construction projects. Because there is no way to accurately predict the intensity of development projects under the Incentive District or their implementation timing, this impact is considered potentially significant and unavoidable.

Assuming implementation of **MM Incentive District AIR-1a through AIR-1c**, a maximum of 65 dwelling units per acre, and up to 30,000 square feet of retail development per acre, the following development could occur simultaneously and result in less than significant impacts (i.e. emissions below the daily emissions thresholds):³

- up to six 1-acre lots;
- up to three 2-acre lots;
- up to one 5-acre and four 1-acre lots;
- up to one 5-acre lot and two 2-acre lots; or
- up to two 5-acre lots.

However, development exceeding these levels would likely result in emissions above the daily thresholds resulting in short-term emissions of nonattainment air pollutants which would result in a significant contribution to existing or projects air quality violations.

Operation of Projects Developed under the Incentive District

In addition to potential construction-period effects, the potential development projects under the Incentive District would result in mobile source emissions generated by vehicle trips from future development and population growth. Information regarding specific development projects, trip generation, and locations of sensitive receptors in relation to potential future projects would be needed in order to quantify the level of impact associated with operational activities. As this additional level of detail is not available at this time and would be speculative to estimate a detailed analysis is not possible.

Operational emissions from future development projects that could occur as a result of adoption of the Incentive District would generate long-term emissions of nonattainment air pollutants in the SDAB of O₃ precursors (i.e., VOCs and NO_x), PM₁₀ and PM_{2.5} as a result of normal day-to-day activities. Future development that could result through adoption of the Incentive District could result in an increase in overall area density. However, the new buildings would be built to meet or exceed increasingly more energy efficient Title 24 standards. According to the CEC, the Title 24 (2016) standards, which are effective January 1, 2017, result in approximately 28 percent less energy for residential and 5 percent less energy for nonresidential lighting, heating, cooling, ventilation, and water heating compared to the previous Title 24 (2013) standards. It is expected that future updates to the Title 24 standards would result in increased energy efficiency. The next iteration of the Title 24 standards are anticipated in 2019; however, estimated buildings energy reductions from these future standards are not yet known or available.

The California Public Utilities Commission (CPUC) has also designed the Zero Net Energy (ZNE) Action Plan to make new residential and commercial construction in California zero net energy by 2030 in order to meet the state's greenhouse gas goals. The ZNE Action Plan's key

³ Since the average lot size is between one and two acres, the analysis focused on one and two acres with a maximum of 5 acres as an outside development size.

milestones are achieved by improving and expanding Title 24 standards, providing incentives, mandating carbon benchmarking and labeling, and developing performance data.

It is not possible to accurately predict the increased level of energy efficiency associated with future updates to the Title 24 standards. Furthermore, Title 24 only regulates a portion of a buildings energy usage primarily related to lighting, heating, cooling, ventilation, and water heating; therefore, is it not possible to speculate how future Title 24 standards would affect the overall energy profile of a building. Nonetheless, it is reasonable to assert that future buildings built as a result of adoption of the Incentive District would likely replace less energy efficient buildings and result in improved energy efficiency on a per dwelling unit or per square foot basis. Nonetheless, buildout of future development projects that could occur as a result of adoption of the Incentive District could result in increased overall density, which may result in an overall increase in building energy emissions. Similarly, with increased density, population may increase as a result of adoption of the Incentive District and result in increased overall evaporative emissions (i.e., VOCs) from consumer products and architectural coatings.

The TIA for the project shows that daily per capita vehicles miles traveled (VMT) under future year 2035 with project conditions would be approximately 6.36 VMT per capita compared to the 2008 model base year VMT of 6.56 VMT per capita (IBI 2017). The future year 2035 without the project would be approximately 7.11 VMT per capita (IBI 2017). Thus, VMT per capita would be reduced with the project compared to the 2008 model base year and future no project conditions by approximately 3 percent and 11 percent, respectively. Therefore, the project would result in increased transportation efficiency on a per capita basis relative to the 2008 model base year and future year 2035 no project conditions, and would reduce per capita mobile source emissions. This reduction in per capita VMT is supportive of per capita VMT reduction efforts in the SANDAG 2050 RTP and SCS.

Per capita emissions of mobile source exhaust pollutants (from vehicles), in particular VOC, NO_x, and CO, are expected to decline in future years relative to existing conditions due to improved vehicle emission standards and fuel economy standards that have been adopted by the USEPA and State of California (i.e., emissions standards through vehicle model year 2025). Under current USEPA standards, by vehicle model year 2025, passenger cars and light-duty trucks are required to achieve 54.5 miles per gallon (if emissions reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the USEPA, a model year 2025 vehicle would be required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile and would emit approximately one-half of the GHG emissions from a model year 2010 vehicle (USEPA 2012). Nonetheless, future development that could occur as a result of adoption of the Incentive District could result in an increase in the total amount of VMT due to increased overall density, which may result in an overall increase in mobile source emissions, despite the improved transportation efficiency and per capita emissions reductions expected from mobile sources meeting increasingly more stringent vehicle emissions standards.

For these reasons, the operation of the projects developed under the Incentive District would result in potentially significant impact. To reduce these impacts, the following mitigation measures shall be required for projects developed under the Incentive District regulations.

MM Incentive District AIR-2: Prior to the issuance of a building permit, individual development projects proposed under the Incentive District regulations shall comply with the following mitigation measures:

- a. Provide direct pedestrian and bicycle access from any Incentive District residential development with a density of four or more residences per acre and in any mixed-use or commercial development to off-site adjacent neighborhood amenities, parks, schools, shopping areas, existing bike paths, and transit stops. Low, medium, and high density Incentive District developments shall have curbs and sidewalks on both sides of the street.
- b. For medium to high density residential, mixed-use, or commercial developments in the Incentive District area where transit services exist but no transit stop is located within one-half mile of the development site or where transit service does not exist and the development project is within a transit district's sphere of influence, development projects shall provide plans indicating locations of bus turnouts and loading areas with shelters that are acceptable to the local transit provider.
- c. Promote the expanded use of renewable fuel and low-emission vehicles by including one or both of the following project components: provide preferential parking for ultra-low emission, zero-emission, and alternative-fuel vehicles; and/or provide electric vehicle supply equipment within the development that meets or exceeds the Tier 1 requirements in the California Green Building Standards.
- d. Development projects shall be required to reduce energy consumption by designing buildings that meet or exceed the Tier 1 building energy budget requirements in the California Green Building Standards.
- e. Development projects shall be required to reduce water consumption by installing water-efficient fixtures, appliances, toilets/urinals, and landscape irrigation systems that meet or exceed the Tier 1 requirements in the California Green Building Standards.

As detailed information regarding individual development projects within the Incentive District is not currently available, it cannot be determined with certainty that the above measures would reduce impacts to a less than significant level. Additional feasible measures beyond the mitigation provided by **MM Incentive District AIR-2** cannot be developed without knowing the exact nature of the proposed developments including but not limited to the types and sizes of the proposed uses and associated trip generation rates. Because there is no way to accurately predict the nature or intensity of development projects under the Incentive District, this impact is considered significant and unavoidable.

Issue 3: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

The two primary emissions of concern regarding health effects for land development projects are diesel PM and CO. Separate discussions are provided below analyzing the potential for sensitive receptors to be exposed to CO hotspots, and TACs from on-site sources during project construction and operations.

CO Hotspots

A project would expose sensitive receptors to substantial pollutant concentrations if it places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors. The project would result in a significant impact if the intersection improvements and realignment of trips associated with the Complete Streets improvements result in CO emissions, that when added to the ambient concentrations, would exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm. As detailed in Sections 3.1 and 3.2, and for purposes of this analysis, the project would be compared to a screening level for the intersection improvements associated with the Complete Streets improvements. If the intersection improvements do not exceed the screening levels, then they would be assumed to not exceed the 1- or 8-hour standards. However, if the intersection improvements degrade the LOS below D (change from LOS D to E or E to F) with peak hourly traffic flows of greater than 3,000 vehicles, impacts would be potentially significant.

The existing plus project peak hour conditions were evaluated against the screening level thresholds. LOS for study area intersections with project intersection degraded to below LOS D during the a.m. or p.m. periods is shown in Table 7.

**TABLE 7
TRAFFIC INTERSECTIONS LEVEL OF SERVICE – EXISTING + PROJECT**

Intersection (Numbering per IBI 2017)	Peak Hour	Existing LOS	Existing + Project LOS	Peak Hourly Flow
27. Coast Highway - Oceanside Boulevard	AM	C	A	1,191
	PM	D	F	2,551
35. Coast Highway – Cassidy Street	AM	A	A	926
	PM	B	F	1,991

SOURCE: IBI 2017.

As shown in Table 7, the LOS changes from D or better to F at two intersections during the peak p.m. hour; however, the peak hourly flow for the Coast Highway-Oceanside Boulevard intersection and Coast Highway-Cassidy Street intersection would be 2,551 and 1,991 vehicles, respectively, which would be under the screening level of 3,000 vehicles during a peak hour. Thus, the Complete Streets improvements would not expose sensitive receptors to substantial concentrations of CO. Therefore, the impact is less than significant.

In addition to the different roadway configurations, the traffic analysis conducted for the project accounts for a different land use conditions in the Future 2035 with Project scenario. This scenario accounts for the Complete Streets improvements and the development and/or redevelopment which may occur under the Incentive District. As shown in Table 8, the intersections with LOS changes to E or F during the peak a.m. or p.m. hours would not result in peak hourly flow exceeding 3,000 vehicles during a peak hour. Thus, the Complete Streets improvements and the development and/or redevelopment which may occur under the Incentive District would not expose sensitive receptors to substantial concentrations of CO. Therefore, the impact is less than significant.

**TABLE 8
TRAFFIC INTERSECTIONS LEVEL OF SERVICE – FUTURE (2035) + PROJECT**

Intersection (Numbering per IBI 2017)	Peak Hour	Future (2035 without Project) LOS	Future (2035 with Project) LOS	Peak Hourly Flow
4. Coast Highway - Surfrider Way	AM	B	A	1,216
	PM	B	F	2,381
15. Seagaze Street - Ditmar Street	AM	A	A	553
	PM	D	F	1,495
21. Coast Highway - Wisconsin Avenue	AM	B	A	1,047
	PM	B	E	2,079
26. Oceanside Boulevard - Tremont Street	AM	B	B	582
	PM	C	E	1,044
27. Coast Highway - Oceanside Boulevard	AM	B	B	1,264
	PM	E	F	2,634
29. Coast Highway - Morse Street	AM	B	A	1,117
	PM	B	F	2,149
35. Coast Highway - Cassidy Street	AM	B	B	986
	PM	B	F	2,116
40. Coast Highway - Vista Way	AM	C	C	1,429
	PM	D	E	2,866
42. Vista Way- Ditmar Street	AM	B	C	1,423
	PM	D	F	2,519
43. Vista Way- Stewart Street	AM	B	C	1,634
	PM	C	E	2,829

SOURCE: IBI 2017.

Toxic Air Contaminants

Complete Streets Improvements

Project construction of the Complete Streets improvements would result in short-term emissions of diesel PM, which is a TAC. Diesel PM poses a carcinogenic health risk that is measured using an exposure period of 70 years. The exhaust of off-road heavy-duty diesel equipment would emit diesel PM during demolition, site preparation (e.g., clearing); site grading and excavation; paving; installation of utilities, materials transport and handling; facilities construction; and other

miscellaneous activities. SDAPCD has not adopted a methodology for analyzing such impacts and has not recommended that health risk assessments (HRA) be completed for construction-related emissions of TACs.

According to the OEHHA, carcinogenic health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30-year residential exposure period; however, such assessments should be limited to the period or duration of activities associated with the project. The construction period for the Complete Streets improvements project component would be much less than the 30-year period used for risk determination. Because off-road heavy-duty diesel equipment would be used only for short time periods, project construction would not expose sensitive receptors to substantial emissions of TACs. Therefore, this impact would be less than significant.

Incentive District

Construction-related activities could also result in the emission of TACs affecting nearby sensitive receptors. The primary TACs that could be emitted during construction would be diesel PM from construction equipment exhaust. Diesel PM exhaust is a complex mixture of thousands of gases and fine particles commonly known as “soot.” Diesel PM is emitted by heavy equipment operations during grading, excavation, and transportation activities. Health risks from carcinogenic TACs are usually described in terms of cancer risk. Cancer risk is the likelihood that a person exposed to concentrations of TACs over 30 years or more would contract cancer, based on the use of standard risk-assessment methodology. Diesel PM also represents a chronic health hazard from exposures of a year or more.

The construction period for the potential development and redevelopment of an individual project as result of adoption of the Incentive District would be much less than the 30-year period used for risk determination for residential exposures. Because off-road heavy-duty diesel equipment would be used only for short time periods of generally one to two years for typical development projects, project-level construction during future development projects would typically not expose sensitive receptors to substantial emissions of TACs that exceed the established significance thresholds. However, given the potential amount of development associated with implementation of the Incentive District, it is reasonable to assume that on a programmatic-level, some large-scale construction activities could occur in proximity to sensitive receptors that could expose sensitive receptors to substantial emissions of TACs that exceed the established significance thresholds, thereby potentially resulting in significant impacts.

In addition, potential development and redevelopment under the Incentive District would generally result in an increase in density in the project corridor, and it is possible that sensitive uses could be located near sources of TAC emissions within the distances specified in the CARB advisory recommendations (see Table 9). For these reasons, impacts related to operational TAC emissions would be considered potentially significant when considering the various development projects that could be constructed under the Incentive District.

**TABLE 9
CARB RECOMMENDATIONS ON SITING NEW SENSITIVE LAND USES**

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	<ul style="list-style-type: none"> Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	<ul style="list-style-type: none"> Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points
Dry Cleaners using Perchloroethylene	<ul style="list-style-type: none"> Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	<ul style="list-style-type: none"> Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

SOURCE: California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, (2005).

The following mitigation measure would be required to reduce TAC impacts for the individual development projects that are proposed under the Incentive District.

MM Incentive District AIR-3: Prior to the issuance of a grading or building permit, whichever is required first, individual development projects proposed under the Incentive District shall comply with the following requirements:

- a. Projects locating sources of TAC emissions near sensitive receptors within the advisory guideline recommendations in the *CARB Air Quality and Land Use Handbook* (or future adopted subsequent document) shall conduct a health risk assessment to sufficiently demonstrate that impacts would not exceed the adopted significance thresholds inclusive of project-level design features, as appropriate and feasible. The types of projects that would be required to comply with this measure and more detail on the required features and recommendations are provided in Table 9 (CARB Recommendations on Siting and New Sensitive Land Uses).
- b. Projects requiring the use of diesel-fueled heavy-duty construction equipment that generates on-site emissions of one (1) pound per day of diesel particulate matter or more for a period of six-months or more within 500 feet of sensitive receptors shall conduct a health risk assessment to sufficiently demonstrate that impacts would not exceed the adopted significance thresholds inclusive of project-level design features, as appropriate and feasible.

Implementation of **MM Incentive District AIR-3** would reduce potential TAC impacts to a less-than-significant level.

Odors

Issue 4: Would the proposed project create objectionable odors affecting a substantial number of people?

Land uses that are associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Neither the Complete Streets improvements nor the Incentive District would include these land uses that are typically associated with odor generation.

During construction, exhaust from equipment, and activities associated with the application of pavement, finishes, or paints may produce discernible odors typical of most construction sites. Such odors would be temporary sources of nuisance to adjacent uses, and would not affect a substantial number of people. As well, odors associated with construction would be temporary and intermittent in nature.

For these reasons, the proposed project would not result in objectionable odors for the neighboring uses and impacts would be less than significant.

Cumulative Air Quality for Non-Attainment Pollutants

Issue 5: Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The proposed project is located within the SDAB, which is considered the cumulative study area for air quality. Because the SDAB is currently classified as a state nonattainment area for O₃, PM₁₀, and PM_{2.5}, cumulative development consisting of the project along with other reasonably foreseeable future projects in the SDAB as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. However, based on the County's Guidelines regarding cumulative air quality impact methodology, the County recommends that if an individual project results in air emissions of criteria pollutants (ROG, CO, NO_x, SO_x, PM₁₀, and PM_{2.5}) that exceed the screening level thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region (SDAB) is in non-attainment under an applicable federal or state ambient air quality standard.

Complete Streets Improvements

As shown in Table 6, the construction emissions associated with the Complete Streets improvements would not exceed SDAPCD's screening level thresholds. Operation of the Complete Streets improvements is not expected to result directly in an increase in emissions.

Thus, because the project's construction-period and operational impacts would be less than significant, the project would not result in a significant cumulative impact when considered with other past, present and reasonably foreseeable projects. Furthermore, the Complete Streets improvements would also be consistent with SDAPCD's RAQS. The project would not conflict with SDAPCD's air quality planning efforts for nonattainment pollutants and would not lead to a cumulatively considerable net increase in nonattainment pollutants during operations. Therefore, impacts would be less than significant on a cumulative basis.

Incentive District

Implementation of the Incentive District would generate pollutant emissions from construction and operation al emissions from potential future development under the Incentive District. Future development that could occur as a result of adoption of the Incentive District could result in an increase in density or in the total amount of VMT relative to existing conditions, which may result in an overall increase in building and mobile source emissions, despite the improved energy and transportation efficiency and emissions reductions expected from buildings and mobile sources meeting increasingly more stringent energy efficiency and vehicle emissions standards. **MM Incentive District AIR-1a though AIR-1c, and MM Incentive District AIR-2** would reduce construction and operational emissions from future development that could occur as a result of adoption of the Incentive District. However, detailed information regarding individual development projects within the Incentive District is not currently available. Thus, it cannot be determined with certainty that the above measures would reduce impacts to a less than significant level. Additional feasible measures beyond the mitigation identified above cannot be developed without knowing the exact nature of the proposed developments including but not limited to the types and sizes of the proposed uses and associated trip generation rates. Therefore, development under the Incentive District would potentially result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment. Therefore, impacts would be significant and unavoidable.

Greenhouse Gas Emissions

Issue 5: Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Complete Streets Improvements

The Complete Streets improvements are expected to result in a change in GHG emissions only during construction. Construction-related GHG emissions for the Complete Streets improvements were estimated using the same assumptions as the air quality analysis, and accounts for the completion of 12 roundabouts and associated Complete Streets improvements. Total estimated construction-related GHG emissions are shown in Table 10.

As shown in Table 10, the total estimated GHG emissions during construction of the Complete Streets improvements would be approximately 1,858 MT of CO₂e, which would equal to approximately 62 MT of CO₂e per year after amortization over 30 years.

TABLE 10
ESTIMATED TOTAL CONSTRUCTION GHG EMISSIONS

Emission Source	Estimated CO ₂ e Emissions
Total Construction Emissions (2017)	1,858 (MT)
Annual Construction (Amortized over 30 years)	62 (MT/yr)

CO₂e= carbon dioxide equivalent; MT =metric tons; MT/yr = metric tons per year.
SOURCE: ESA CalEEMod Modeling, August 2016.

The operation of the Complete Streets improvements is not expected to result directly in changes in area/indirect sources of GHG emissions associated with electricity and natural gas consumption, water transport, and solid waste generation. According to the TIA prepared for the project (IBI 2017), the Complete Streets improvements are not expected to result in any net increases in vehicle trips when compared to existing baseline conditions. Therefore, operation of the Complete Streets improvements would result in no impacts. The combined construction and operational impacts from the Complete Streets improvements would be *less than significant* as GHG emissions would not exceed the threshold.

Incentive District

Information regarding specific future redevelopment projects within the Incentive District would be needed in order to quantify the level of impact associated with construction activities. However, given the amount of potential development associated with implementation of the Incentive District, it is reasonable to assume that on a programmatic-level, some large-scale construction activities with specific construction schedules and scenarios (i.e., emissions per day) could exceed thresholds and result in a significant impact. Construction of the Incentive District would be dependent on the market needs, however based on the analysis described under Issue 2 above, the maximum emissions would be 1,738 MT CO₂e annually with an amortized rate of 58 MT CO₂e annually.

The operation of the potential future redevelopment within the Incentive District would result in a change in area and indirect sources of GHG emissions associated with electricity and natural gas consumption, water transport, and solid waste generation. In addition, development under the Incentive District would add vehicle trips to the future traffic volumes when compared to existing baseline traffic volumes (IBI 2017). The traffic analysis conducted for the project accounts for different land use conditions in the Future 2035 with Project scenario. This scenario accounts for the Complete Streets improvements and the development and/or redevelopment which may occur under the Incentive District.

Total GHG Emissions

Complete Streets Improvements

The estimated operational GHG emissions resulting from the Complete Streets improvements are shown in Table 11, and only the construction-related GHG emissions contributes to the overall GHG emissions (i.e., no change in operation emissions). As shown in Table 11, the total net annual GHG emissions associated with the Complete Streets improvements would be approximately 62 MT of CO₂e per year (detailed calculations are included in Appendix A of this report), which would not exceed the County’s proposed screening level threshold of 900 MT of CO₂e per year. Therefore, the net increase in GHG emissions associated with the Complete Streets improvements would be less than significant.

**TABLE 11
ESTIMATED CONSTRUCTION GHG EMISSIONS**

Emission Source	Estimated Emissions CO₂e (MT/yr)
Annual Construction (Amortized over 30 years)	62
<i>Total Annual GHG Emissions</i>	62
Screening Level Threshold	900
Significant Impact?	No

CO₂e= carbon dioxide equivalent; MT/yr = metric tons per year; %=percent.
SOURCE: ESA CalEEMod Modeling, August 2016.

Incentive District

Information regarding specific development projects within the Incentive District, such as trip generation, and energy usage, would be needed in order to quantify GHG emissions from construction and operational activities. Project development screening levels were evaluated to determine typical project types and sizes that would result in a net change in GHG emissions less than the threshold of significance. In general, individual residential and commercial projects that would be developed pursuant to adoption of the Incentive District that result in a net increase in development over existing project site conditions less than the following screening levels would likely not exceed the GHG screening threshold individually:

- Mid-rise residential up to a net increase of 66 dwelling units over existing site conditions;
- Fast food restaurant with drive through up to a net increase of 2,930 square feet over existing site conditions;
- High-turnover sit down restaurant up to a net increase of 8,080 square feet over existing site conditions;
- Strip mall retail up to a net increase of 23,500 square feet over existing site conditions; and
- General office building up to a net increase of 50,000 square feet over existing site conditions.

Example mixed-use project scenarios that would result in a net increase in development over existing project site conditions less than the following screening levels would likely not exceed the GHG screening threshold individually:

- Mixed-use consisting of the following uses:
 - Mid-rise residential up to a net increase of 25 dwelling units over existing site conditions;
 - Fast food restaurant with drive through up to a net increase of 1,400 square feet over existing site conditions; and
 - Strip mall retail up to a net increase of 3,350 square feet over existing site conditions.
- Mixed-use consisting of the following uses:
 - Mid-rise residential up to a net increase of 30 dwelling units over existing site conditions;
 - High-turnover sit down restaurant up to a net increase of 2,800 square feet over existing site conditions; and
 - General office building up to a net increase of 10,000 square feet over existing site conditions.

Individual projects that exceed the land use screening levels above, or an equivalent combination/proportion of the land use screening levels for a mixed-use development, could potentially exceed the GHG screening threshold. As discussed in Section 3.6, in October 2016, the City is in the process of developing an E-CAP (i.e., Climate Action Element), the purpose of which is to identify how the City can do its part to achieve State GHG emission reduction goals, provide measures for the City to mitigate its GHG emissions impact, and establish a method to determine whether future actions, such as approval of development projects, are consistent with the GHG emission reduction goals. The E-CAP is not available and is anticipated to be released in 2018. As such, project consistency with the E-CAP cannot be evaluated at this time. Nonetheless, it is expected that individual development projects within the Incentive District would undergo a consistency analysis with applicable measures in the E-CAP after adoption through the public process, which could potentially streamline the determination of GHG impacts under CEQA.

As the California Air Pollution Control Officers Association (CAPCOA) notes, the question of potential impacts to climate change from increases in GHG emission is uniquely cumulative in nature (CAPCOA 2008). Emissions from the operation of development projects would arise largely from mobile sources and electricity production, and both are sources of emissions regulated at the State level with clear mandates and milestones to reduce the GHG intensity of vehicular fuels and supplied power. As discussed above, current and future Title 24 standards will result in highly efficient buildings, with relatively low GHG footprints. The Title 24 standards also require that new buildings are “solar ready” and provide appropriate equipment and wiring and solar zone, which is a section of the roof designated and reserved for the future installation of a solar electric or solar thermal system.

However, given the amount of development that could occur with implementation of the Incentive District, it is reasonable to assume that in the aggregate, development projects could

eventually result in a net increase in GHG emissions over current emission levels in excess of the County's proposed screening level threshold which is 900 MT of CO₂e per year. Therefore, implementation of the Incentive District could result in significant GHG emissions, and mitigation is required. Compliance with current and future Title 24 standards and **MM Incentive District AIR-2** would result in development projects which are more energy efficient than current development, relying on a wide array of strategies such as, possibly, solar water heating and photovoltaic roofs, Energy Star® appliances, etc., resulting a reduction in GHG emissions as compared to current practices. There are no additional feasible mitigation measures available. Thus, even with **MM Incentive District AIR-2**, the net increase in GHG emissions in the aggregate could exceed thresholds, and impacts are considered significant and unavoidable.

Consistency with GHG Emissions Reduction Plans or Policies

Issue 6: Would the proposed project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Of the Recommended Actions contained in CARB's Scoping Plan, the actions that are most applicable to the project would be Actions T-3 (Regional Transportation-Related Greenhouse Gas Targets). CARB Scoping Plan Action T-3 aims to reduce GHG reductions by increasing access to a variety of mobility options such as transit, biking, and walking.

The Complete Streets improvements project component would be designed to allow for continuous bicycle facilities and streetscape improvements, and therefore, is consistent with the recommended actions in the CARB's Scoping Plan. Therefore, the Complete Streets improvements portion of the project would be consistent with the Scoping Plan measures.

Similarly, the Incentive District would be designed to allow for continuous bicycle facilities and streetscape improvements, and therefore is consistent with this recommendation in the CARB Scoping Plan. The Incentive District's goal is to increase population density and revitalization of the community. This is consistent with regional plans to reduce transportation-related GHG emissions as part of the overall statewide strategy under AB 32. The project would be supportive of the goals and benefits of the SANDAG RTP/SCS, which seeks "to guide the San Diego region toward a more sustainable future by integrating land use, housing, and transportation planning to create communities that are more sustainable, walkable, transit-oriented, and compact" (SANDAG 2011). As discussed previously, the TIA for the project shows that daily per capita VMT under future year 2035 with project conditions would be reduced compared to the 2008 model base year and future no project conditions by approximately 3 percent and 11 percent, respectively (IBI 2017). The project would reduce per capita VMT by locating more people in proximity to residential and commercial land uses and services, which would also revitalize the community. Because both the Complete Streets improvements and Incentive District would be generally consistent with the Scoping Plan measures and the SANDAG RTP/SCS, and impacts would be less than significant.

As discussed previously, the City is in the process of developing an E-CAP with an anticipated release date in 2018. As such, project consistency with the E-CAP cannot be evaluated at this

time. Nonetheless, it is expected that individual development projects within the Incentive District would undergo a consistency analysis with applicable measures in the E-CAP after adoption through the public process, which could potentially streamline the determination of GHG impacts under CEQA and provide additional evidence supporting the project's consistency with applicable GHG reduction plans and policies.

4.4 Cumulative Impacts

CEQA Guidelines require a discussion of cumulative impacts of a project “when the project’s incremental effect is cumulatively considerable” (2011 CEQA Guidelines, Section 15130). As defined by Section 15065 (a)(3) “cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (2011 CEQA Guidelines, Section 15065 (a)(3)). These cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines Section 15355).

This cumulative impacts section provides a cumulative impact analysis of the entire project (Complete Streets improvements and the Incentive District) separately for project construction and project operation. Construction and operation of the entire project would include future development projects that have not yet been proposed. Since the City has no control over the timing or sequencing of the cumulative project, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction future development projects would be speculative. For this reason, the methodology to assess a project’s cumulative impact differs from the cumulative impacts methodology employed for other environmental issue areas. For air quality, the project-specific air quality significance thresholds are used to determine the potential cumulative impacts to regional air quality.

With respect to emissions of GHGs, potential impacts to climate change from increases in GHG emission is uniquely cumulative in nature (CAPCOA 2008). The California Natural Resources Agency has clarified that the CEQA Guidelines amendments focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA’s requirements for cumulative impact analysis (see Section 15064(h)(3)).⁴ Therefore, the project-level analysis provided above serves as a cumulative impact assessment for GHG emissions.

Air Quality

The project would result in the emission of criteria pollutants during construction of the Complete Streets improvements and the development of the Incentive District. Based on the project-specific level of emissions, the project’s cumulative impacts would be potentially significant because its maximum daily construction emissions could potentially exceed the SDAPCD screening level

⁴ See generally California Natural Resources Agency, Final Statement of Reasons for Regulatory Action (December 2009), pp. 11-13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009, https://www.opr.ca.gov/docs/Transmittal_Letter.pdf, accessed December 2016.

thresholds for maximum daily emissions. As detailed information regarding individual development projects within the Incentive District is not currently available, it cannot be determined with certainty that **MM Incentive District AIR-1a through AIR-1c** would reduce construction emissions from future development that could occur as a result of adoption of the Incentive District to a less-than-significant level. Additional feasible measures cannot be developed without knowing the exact timing or location of the construction projects. Because there is no way to accurately predict the intensity of construction associated with the Incentive District or the construction timing, this impact is considered cumulatively significant and unavoidable.

Similarly, there is no way to accurately predict the intensity or timing of construction associated with the entire project and other non-Incentive District projects. As a result, cumulative construction impacts with respect to non-Incentive District projects are also considered cumulatively significant and unavoidable.

Operation of the potential development projects under the Incentive District would result in mobile source emissions generated by vehicle trips from future development and population growth. Operation of the Complete Streets improvements is not expected to result directly in an increase in emissions and would therefore not contribute to cumulative impacts. Per capita operational emissions from development projects under the Incentive District are expected to decline in future years relative to existing conditions, in particular mobile source exhaust pollutants from vehicles (i.e., mobile source VOC, NO_x, and CO emissions), due to improved vehicle emission standards and fuel economy standards that have been adopted by the USEPA and State of California (i.e., emissions standards through vehicle model year 2025). Nonetheless, future development that could occur as a result of adoption of the Incentive District could result in an increase in the total amount of VMT due to increased overall density, which may result in an overall increase in mobile source emissions, despite the improved transportation efficiency and per capita emissions reductions expected from mobile sources meeting increasingly more stringent vehicle emissions standards.

As detailed information regarding individual development projects within the Incentive District is not currently available, it cannot be determined with certainty that **MM Incentive District AIR-2** would reduce impacts to a less-than-significant level. Additional feasible measures beyond the mitigation provided by **MM Incentive District AIR-2** cannot be developed without knowing the exact nature of the proposed developments including but not limited to the types and sizes of the proposed uses and associated trip generation rates. Because there is no way to accurately predict the nature or intensity of development projects under the Incentive District, this impact is considered cumulatively significant and unavoidable.

Similarly, there is no way to accurately predict the intensity of development projects associated with the entire project and other non-Incentive District projects. As a result, cumulative operational impacts with respect to non-Incentive District projects are also considered cumulatively significant and unavoidable.

Greenhouse Gases – Construction and Operations

Cumulative development of the entire project (Complete Streets improvements and the Incentive District) could result in development projects in the aggregate that could result in a net increase in GHG emissions over current emission levels in excess of the County's proposed screening level threshold which is 900 MT of CO₂e per year. Therefore, implementation of the Complete Streets improvements and Incentive District could result in significant GHG emissions. Compliance with current and future Title 24 standards and **MM Incentive District AIR-2** would result in development projects which are more energy efficient than current development, relying on a wide array of strategies such as, possibly, solar water heating and photovoltaic roofs, Energy Star® appliances, etc., resulting a reduction in GHG emissions as compared to current practices. There are no additional feasible mitigation measures available. Thus, even with **MM Incentive District AIR-2**, the net increase in GHG emissions in the aggregate could exceed thresholds, and impacts are considered potentially cumulatively significant and unavoidable.

As the entire project would be considered potentially cumulatively significant and unavoidable, and since GHG impacts are exclusively cumulative in nature, operational impacts with respect to non-Incentive District projects are also considered potentially cumulatively significant and unavoidable.

References

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Appendix A

Emissions Calculations and Model Output

A-1 Complete Streets Improvements Emissions Calculations and Model Output

Oceanside

Appendix A, Air Quality Worksheets and Greenhouse Gas Emissions Data Worksheets

Construction Emissions

- CalEEMod Output (Summer)
- CalEEMod Output (Winter)
- CalEEMod Output (Annual)

Appendix A, Air Quality Worksheets and Greenhouse Gas Emissions Data Worksheets

Construction Emissions

- CalEEMod Output (Summer)

Oceanside Coast Highway Corridor Study - Construction - San Diego County APCD Air District, Summer

Oceanside Coast Highway Corridor Study - Construction
San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - See AQ Model Inputs

Off-road Equipment -

Off-road Equipment - See AQ Model Inputs (Assumes 2 roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Trips and VMT - See AQ model inputs (Vendor trip for water trucks)

Grading - See AQ Model Inputs (Assumes 2 Roundabouts)

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	230.00	25.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	8.00	13.00
tblConstructionPhase	NumDays	18.00	25.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	12/31/2017	3/1/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	3/30/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/15/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	2/14/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	4/28/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/30/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	3/2/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/31/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	3/31/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/16/2018
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialImported	0.00	833.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	203.00	199.00

tblOffRoadEquipment	HorsePower	132.00	130.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	78.00	80.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards

tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	22.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.5607	83.1434	61.7056	0.1042	0.7742	4.3689	4.8753	0.2035	4.0270	4.1617	0.0000	10,350.7685	10,350.7685	2.9903	0.0000	10,425.5255
Maximum	8.5607	83.1434	61.7056	0.1042	0.7742	4.3689	4.8753	0.2035	4.0270	4.1617	0.0000	10,350.7685	10,350.7685	2.9903	0.0000	10,425.5255

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	8.5607	83.1434	61.7056	0.1042	0.7460	4.3689	4.8753	0.1996	4.0270	4.1617	0.0000	10,350.7685	10,350.7685	2.9903	0.0000	10,425.5255
Maximum	8.5607	83.1434	61.7056	0.1042	0.7460	4.3689	4.8753	0.1996	4.0270	4.1617	0.0000	10,350.7685	10,350.7685	2.9903	0.0000	10,425.5255

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	3.64	0.00	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/15/2018	6	13	
2	Site Preparation	Site Preparation	1/16/2018	1/30/2018	6	13	
3	Grading	Grading	1/31/2018	2/14/2018	6	13	
4	Utility Trenching	Trenching	2/15/2018	3/1/2018	6	13	
5	Building Construction	Building Construction	3/2/2018	3/30/2018	6	25	
6	Paving	Paving	3/31/2018	4/28/2018	6	25	

Acres of Grading (Site Preparation Phase): 0.23

Acres of Grading (Grading Phase): 0.23

Acres of Paving: 3.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Utility Trenching	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Demolition	Concrete/Industrial Saws	2	10.00	81	0.73
Demolition	Excavators	2	10.00	162	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Grading	Excavators	2	10.00	162	0.38
Paving	Pavers	2	10.00	125	0.42
Paving	Rollers	2	10.00	80	0.38
Demolition	Rubber Tired Loaders	2	10.00	199	0.36
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	4	10.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	4	10.00	130	0.36
Site Preparation	Rubber Tired Loaders	2	10.00	199	0.36
Building Construction	Welders	0	8.00	46	0.45
Demolition	Crushing/Proc. Equipment	2	10.00	85	0.78
Demolition	Signal Boards	4	10.00	6	0.82
Demolition	Tractors/Loaders/Backhoes	2	10.00	97	0.37

Site Preparation	Signal Boards	4	10.00	6	0.82
Site Preparation	Excavators	2	10.00	162	0.38
Grading	Plate Compactors	2	10.00	8	0.43
Grading	Signal Boards	4	10.00	6	0.82
Grading	Rubber Tired Loaders	2	10.00	199	0.36
Utility Trenching	Trenchers	2	10.00	80	0.50
Building Construction	Signal Boards	4	10.00	6	0.82
Building Construction	Excavators	2	10.00	162	0.38
Building Construction	Plate Compactors	2	10.00	8	0.43
Building Construction	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Signal Boards	4	10.00	6	0.82
Paving	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Excavators	2	10.00	162	0.38
Paving	Forklifts	2	10.00	89	0.20
Paving	Graders	2	10.00	174	0.41
Paving	Plate Compactors	2	10.00	8	0.43
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

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
Utility Trenching	4	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	56.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	14	35.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	2.00	104.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	24	60.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	25.00	2.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

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	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573		7,044.5200	7,044.5200	1.4302		7,080.2742
Total	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573		7,044.5200	7,044.5200	1.4302		7,080.2742

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.1490	0.1073	1.1981	3.1500e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		314.0286	314.0286	0.0108		314.2972
Total	0.1593	0.3708	1.2679	3.7100e-003	0.3011	4.1300e-003	0.3052	0.0802	3.8800e-003	0.0840		373.6666	373.6666	0.0155		374.0534

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573	0.0000	7,044.5200	7,044.5200	1.4302		7,080.2742
Total	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573	0.0000	7,044.5200	7,044.5200	1.4302		7,080.2742

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003			59.7561
Worker	0.1490	0.1073	1.1981	3.1500e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		314.0286	314.0286	0.0108			314.2972
Total	0.1593	0.3708	1.2679	3.7100e-003	0.3011	4.1300e-003	0.3052	0.0802	3.8800e-003	0.0840		373.6666	373.6666	0.0155			374.0534

3.3 Site Preparation - 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					0.0512	0.0000	0.0512	6.9400e-003	0.0000	6.9400e-003			0.0000				0.0000
Off-Road	2.7466	29.3570	19.9965	0.0398		1.3631	1.3631		1.2596	1.2596		3,901.5331	3,901.5331	1.1634			3,930.6191
Total	2.7466	29.3570	19.9965	0.0398	0.0512	1.3631	1.4143	6.9400e-003	1.2596	1.2666		3,901.5331	3,901.5331	1.1634			3,930.6191

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	0.2641	9.1752	1.8923	0.0232	0.5041	0.0361	0.5402	0.1381	0.0345	0.1727		2,523.3304	2,523.3304	0.2224			2,528.8912
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003			59.7561
Worker	0.1064	0.0766	0.8558	2.2500e-003	0.2054	1.4800e-003	0.2069	0.0545	1.3600e-003	0.0558		224.3061	224.3061	7.6800e-003			224.4980
Total	0.3808	9.5153	2.8179	0.0260	0.7230	0.0396	0.7626	0.1965	0.0379	0.2344		2,807.2745	2,807.2745	0.2348			2,813.1454

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					0.0230	0.0000	0.0230	3.1200e-003	0.0000	3.1200e-003			0.0000			0.0000
Off-Road	2.7466	29.3570	19.9965	0.0398		1.3631	1.3631		1.2596	1.2596	0.0000	3,901.5331	3,901.5331	1.1634		3,930.6191
Total	2.7466	29.3570	19.9965	0.0398	0.0230	1.3631	1.3861	3.1200e-003	1.2596	1.2627	0.0000	3,901.5331	3,901.5331	1.1634		3,930.6191

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	0.2641	9.1752	1.8923	0.0232	0.5041	0.0361	0.5402	0.1381	0.0345	0.1727		2,523.3304	2,523.3304	0.2224		2,528.8912
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.1064	0.0766	0.8558	2.2500e-003	0.2054	1.4800e-003	0.2069	0.0545	1.3600e-003	0.0558		224.3061	224.3061	7.6800e-003		224.4980
Total	0.3808	9.5153	2.8179	0.0260	0.7230	0.0396	0.7626	0.1965	0.0379	0.2344		2,807.2745	2,807.2745	0.2348		2,813.1454

3.4 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					0.0278	0.0000	0.0278	3.3900e-003	0.0000	3.3900e-003			0.0000			0.0000
Off-Road	2.8468	29.9853	20.5228	0.0410		1.3875	1.3875		1.2840	1.2840		3,987.7318	3,987.7318	1.1724		4,017.0414
Total	2.8468	29.9853	20.5228	0.0410	0.0278	1.3875	1.4153	3.3900e-003	1.2840	1.2874		3,987.7318	3,987.7318	1.1724		4,017.0414

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	0.0732	2.5446	0.5248	6.4300e-003	0.1398	0.0100	0.1498	0.0383	9.5800e-003	0.0479		699.8036	699.8036	0.0617		701.3458
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	0.2112	2.9001	1.6216	9.6900e-003	0.3998	0.0138	0.4136	0.1076	0.0132	0.1208		1,028.6090	1,028.6090	0.0756		1,030.4996

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					0.0125	0.0000	0.0125	1.5300e-003	0.0000	1.5300e-003			0.0000			0.0000
Off-Road	2.8468	29.9853	20.5228	0.0410		1.3875	1.3875		1.2840	1.2840	0.0000	3,987.7317	3,987.7317	1.1724		4,017.0414
Total	2.8468	29.9853	20.5228	0.0410	0.0125	1.3875	1.4000	1.5300e-003	1.2840	1.2856	0.0000	3,987.7317	3,987.7317	1.1724		4,017.0414

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	0.0732	2.5446	0.5248	6.4300e-003	0.1398	0.0100	0.1498	0.0383	9.5800e-003	0.0479		699.8036	699.8036	0.0617		701.3458
Vendor	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	0.2112	2.9001	1.6216	9.6900e-003	0.3998	0.0138	0.4136	0.1076	0.0132	0.1208		1,028.6090	1,028.6090	0.0756		1,030.4996

3.5 Utility Trenching - 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	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586		1,652.7041	1,652.7041	0.5145		1,665.5669
Total	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586		1,652.7041	1,652.7041	0.5145		1,665.5669

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003		89.7992
Total	0.0529	0.2942	0.4121	1.4600e-003	0.0957	2.6500e-003	0.0983	0.0257	2.5200e-003	0.0282		149.3604	149.3604	7.8000e-003		149.5554

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	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586	0.0000	1,652.7041	1,652.7041	0.5145		1,665.5668
Total	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586	0.0000	1,652.7041	1,652.7041	0.5145		1,665.5668

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003			59.7561
Worker	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003			89.7992
Total	0.0529	0.2942	0.4121	1.4600e-003	0.0957	2.6500e-003	0.0983	0.0257	2.5200e-003	0.0282		149.3604	149.3604	7.8000e-003			149.5554

3.6 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	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125		4,769.6716	4,769.6716	1.4158			4,805.0671
Total	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125		4,769.6716	4,769.6716	1.4158			4,805.0671

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	0.1238	3.1621	0.8373	6.6900e-003	0.1625	0.0247	0.1872	0.0468	0.0237	0.0704		715.6557	715.6557	0.0567			717.0737
Worker	0.2384	0.1717	1.9170	5.0500e-003	0.4600	3.3100e-003	0.4633	0.1220	3.0500e-003	0.1251		502.4458	502.4458	0.0172			502.8756
Total	0.3621	3.3338	2.7544	0.0117	0.6225	0.0280	0.6505	0.1688	0.0267	0.1955		1,218.1014	1,218.1014	0.0739			1,219.9493

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125	0.0000	4,769.6716	4,769.6716	1.4158		4,805.0670
Total	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125	0.0000	4,769.6716	4,769.6716	1.4158		4,805.0670

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	0.1238	3.1621	0.8373	6.6900e-003	0.1625	0.0247	0.1872	0.0468	0.0237	0.0704		715.6557	715.6557	0.0567		717.0737
Worker	0.2384	0.1717	1.9170	5.0500e-003	0.4600	3.3100e-003	0.4633	0.1220	3.0500e-003	0.1251		502.4458	502.4458	0.0172		502.8756
Total	0.3621	3.3338	2.7544	0.0117	0.6225	0.0280	0.6505	0.1688	0.0267	0.1955		1,218.1014	1,218.1014	0.0739		1,219.9493

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.9722	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218		9,752.7958	9,752.7958	2.9671		9,826.9741
Paving	0.3228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	8.2950	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218		9,752.7958	9,752.7958	2.9671		9,826.9741

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.2554	0.1839	2.0540	5.4100e-003	0.4929	3.5500e-003	0.4964	0.1307	3.2700e-003	0.1340		538.3347	538.3347	0.0184		538.7953
Total	0.2657	0.4474	2.1237	5.9700e-003	0.5064	5.6100e-003	0.5120	0.1346	5.2400e-003	0.1399		597.9727	597.9727	0.0232		598.5514

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.9722	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218	0.0000	9,752.7958	9,752.7958	2.9671		9,826.9741
Paving	0.3228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	8.2950	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218	0.0000	9,752.7958	9,752.7958	2.9671		9,826.9741

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	0.0103	0.2635	0.0698	5.6000e-004	0.0135	2.0600e-003	0.0156	3.9000e-003	1.9700e-003	5.8700e-003		59.6380	59.6380	4.7300e-003		59.7561
Worker	0.2554	0.1839	2.0540	5.4100e-003	0.4929	3.5500e-003	0.4964	0.1307	3.2700e-003	0.1340		538.3347	538.3347	0.0184		538.7953
Total	0.2657	0.4474	2.1237	5.9700e-003	0.5064	5.6100e-003	0.5120	0.1346	5.2400e-003	0.1399		597.9727	597.9727	0.0232		598.5514

Appendix A, Air Quality Worksheets and Greenhouse Gas Emissions Data Worksheets

Construction Emissions

- CalEEMod Output (Winter)

Oceanside Coast Highway Corridor Study - Construction - San Diego County APCD Air District, Winter

Oceanside Coast Highway Corridor Study - Construction
San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - See AQ Model Inputs

Off-road Equipment -

Off-road Equipment - See AQ Model Inputs (Assumes 2 roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Trips and VMT - See AQ model inputs (Vendor trip for water trucks)

Grading - See AQ Model Inputs (Assumes 2 Roundabouts)

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	230.00	25.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	8.00	13.00
tblConstructionPhase	NumDays	18.00	25.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	12/31/2017	3/1/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	3/30/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/15/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	2/14/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	4/28/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/30/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	3/2/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/31/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	3/31/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/16/2018
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialImported	0.00	833.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	132.00	130.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	78.00	80.00

tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00

tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	22.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	8.5942	83.1665	61.6074	0.1039	0.7742	4.3690	4.8754	0.2035	4.0271	4.1617	0.0000	10,316.3318	10,316.3318	2.9897	0.0000	10,391.0737
Maximum	8.5942	83.1665	61.6074	0.1039	0.7742	4.3690	4.8754	0.2035	4.0271	4.1617	0.0000	10,316.3318	10,316.3318	2.9897	0.0000	10,391.0737

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	8.5942	83.1665	61.6074	0.1039	0.7460	4.3690	4.8754	0.1996	4.0271	4.1617	0.0000	10,316.3318	10,316.3318	2.9897	0.0000	10,391.0737
Maximum	8.5942	83.1665	61.6074	0.1039	0.7460	4.3690	4.8754	0.1996	4.0271	4.1617	0.0000	10,316.3318	10,316.3318	2.9897	0.0000	10,391.0737

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	3.64	0.00	0.00	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/15/2018	6	13	
2	Site Preparation	Site Preparation	1/16/2018	1/30/2018	6	13	
3	Grading	Grading	1/31/2018	2/14/2018	6	13	
4	Utility Trenching	Trenching	2/15/2018	3/1/2018	6	13	
5	Building Construction	Building Construction	3/2/2018	3/30/2018	6	25	
6	Paving	Paving	3/31/2018	4/28/2018	6	25	

Acres of Grading (Site Preparation Phase): 0.23

Acres of Grading (Grading Phase): 0.23

Acres of Paving: 3.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Utility Trenching	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Demolition	Concrete/Industrial Saws	2	10.00	81	0.73
Demolition	Excavators	2	10.00	162	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Grading	Excavators	2	10.00	162	0.38
Paving	Pavers	2	10.00	125	0.42
Paving	Rollers	2	10.00	80	0.38
Demolition	Rubber Tired Loaders	2	10.00	199	0.36
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	4	10.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	4	10.00	130	0.36
Site Preparation	Rubber Tired Loaders	2	10.00	199	0.36
Building Construction	Welders	0	8.00	46	0.45
Demolition	Crushing/Proc. Equipment	2	10.00	85	0.78
Demolition	Signal Boards	4	10.00	6	0.82
Demolition	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Site Preparation	Signal Boards	4	10.00	6	0.82
Site Preparation	Excavators	2	10.00	162	0.38
Grading	Plate Compactors	2	10.00	8	0.43

Grading	Signal Boards	4	10.00	6	0.82
Grading	Rubber Tired Loaders	2	10.00	199	0.36
Utility Trenching	Trenchers	2	10.00	80	0.50
Building Construction	Signal Boards	4	10.00	6	0.82
Building Construction	Excavators	2	10.00	162	0.38
Building Construction	Plate Compactors	2	10.00	8	0.43
Building Construction	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Signal Boards	4	10.00	6	0.82
Paving	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Excavators	2	10.00	162	0.38
Paving	Forklifts	2	10.00	89	0.20
Paving	Graders	2	10.00	174	0.41
Paving	Plate Compactors	2	10.00	8	0.43
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

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
Utility Trenching	4	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	56.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	14	35.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	2.00	104.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	24	60.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	25.00	2.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

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	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573		7,044.5200	7,044.5200	1.4302		7,080.2742
Total	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573		7,044.5200	7,044.5200	1.4302		7,080.2742

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1683	0.1205	1.1365	2.9600e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		294.8146	294.8146	0.0102		295.0700
Total	0.1790	0.3845	1.2137	3.5000e-003	0.3011	4.1700e-003	0.3052	0.0802	3.9100e-003	0.0841		352.9541	352.9541	0.0153		353.3353

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573	0.0000	7,044.5200	7,044.5200	1.4302		7,080.2742
Total	5.7405	50.4899	40.3072	0.0730		2.8607	2.8607		2.7573	2.7573	0.0000	7,044.5200	7,044.5200	1.4302		7,080.2742

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1683	0.1205	1.1365	2.9600e-003	0.2875	2.0700e-003	0.2896	0.0763	1.9100e-003	0.0782		294.8146	294.8146	0.0102		295.0700
Total	0.1790	0.3845	1.2137	3.5000e-003	0.3011	4.1700e-003	0.3052	0.0802	3.9100e-003	0.0841		352.9541	352.9541	0.0153		353.3353

3.3 Site Preparation - 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					0.0512	0.0000	0.0512	6.9400e-003	0.0000	6.9400e-003			0.0000			0.0000
Off-Road	2.7466	29.3570	19.9965	0.0398		1.3631	1.3631		1.2596	1.2596		3,901.5331	3,901.5331	1.1634		3,930.6191
Total	2.7466	29.3570	19.9965	0.0398	0.0512	1.3631	1.4143	6.9400e-003	1.2596	1.2666		3,901.5331	3,901.5331	1.1634		3,930.6191

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	0.2716	9.2733	2.0346	0.0228	0.5041	0.0369	0.5410	0.1381	0.0353	0.1735		2,481.4580	2,481.4580	0.2308		2,487.2271
Vendor	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1202	0.0861	0.8118	2.1200e-003	0.2054	1.4800e-003	0.2069	0.0545	1.3600e-003	0.0558		210.5818	210.5818	7.3000e-003		210.7643
Total	0.4026	9.6234	2.9236	0.0255	0.7230	0.0405	0.7635	0.1965	0.0387	0.2352		2,750.1794	2,750.1794	0.2431		2,756.2568

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					0.0230	0.0000	0.0230	3.1200e-003	0.0000	3.1200e-003			0.0000			0.0000
Off-Road	2.7466	29.3570	19.9965	0.0398		1.3631	1.3631		1.2596	1.2596	0.0000	3,901.5331	3,901.5331	1.1634		3,930.6191
Total	2.7466	29.3570	19.9965	0.0398	0.0230	1.3631	1.3861	3.1200e-003	1.2596	1.2627	0.0000	3,901.5331	3,901.5331	1.1634		3,930.6191

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	0.2716	9.2733	2.0346	0.0228	0.5041	0.0369	0.5410	0.1381	0.0353	0.1735		2,481.4580	2,481.4580	0.2308		2,487.2271
Vendor	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1202	0.0861	0.8118	2.1200e-003	0.2054	1.4800e-003	0.2069	0.0545	1.3600e-003	0.0558		210.5818	210.5818	7.3000e-003		210.7643
Total	0.4026	9.6234	2.9236	0.0255	0.7230	0.0405	0.7635	0.1965	0.0387	0.2352		2,750.1794	2,750.1794	0.2431		2,756.2568

3.4 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					0.0278	0.0000	0.0278	3.3900e-003	0.0000	3.3900e-003			0.0000			0.0000
Off-Road	2.8468	29.9853	20.5228	0.0410		1.3875	1.3875		1.2840	1.2840		3,987.7318	3,987.7318	1.1724		4,017.0414
Total	2.8468	29.9853	20.5228	0.0410	0.0278	1.3875	1.4153	3.3900e-003	1.2840	1.2874		3,987.7318	3,987.7318	1.1724		4,017.0414

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	0.0753	2.5718	0.5643	6.3300e-003	0.1398	0.0103	0.1500	0.0383	9.8000e-003	0.0481		688.1910	688.1910	0.0640		689.7910
Vendor	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	0.2303	2.9390	1.6156	9.4100e-003	0.3998	0.0141	0.4139	0.1076	0.0134	0.1210		999.0288	999.0288	0.0778		1,000.9735

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					0.0125	0.0000	0.0125	1.5300e-003	0.0000	1.5300e-003			0.0000			0.0000
Off-Road	2.8468	29.9853	20.5228	0.0410		1.3875	1.3875		1.2840	1.2840	0.0000	3,987.7317	3,987.7317	1.1724		4,017.0414
Total	2.8468	29.9853	20.5228	0.0410	0.0125	1.3875	1.4000	1.5300e-003	1.2840	1.2856	0.0000	3,987.7317	3,987.7317	1.1724		4,017.0414

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	0.0753	2.5718	0.5643	6.3300e-003	0.1398	0.0103	0.1500	0.0383	9.8000e-003	0.0481		688.1910	688.1910	0.0640		689.7910
Vendor	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	0.2303	2.9390	1.6156	9.4100e-003	0.3998	0.0141	0.4139	0.1076	0.0134	0.1210		999.0288	999.0288	0.0778		1,000.9735

3.5 Utility Trenching - 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	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586		1,652.7041	1,652.7041	0.5145		1,665.5669
Total	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586		1,652.7041	1,652.7041	0.5145		1,665.5669

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003		84.3057
Total	0.0588	0.2984	0.4019	1.3900e-003	0.0957	2.6900e-003	0.0984	0.0257	2.5500e-003	0.0282		142.3723	142.3723	7.9500e-003		142.5711

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	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586	0.0000	1,652.7041	1,652.7041	0.5145		1,665.5668
Total	1.8259	17.0071	12.6406	0.0164		1.2594	1.2594		1.1586	1.1586	0.0000	1,652.7041	1,652.7041	0.5145		1,665.5668

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003			58.2654
Worker	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003			84.3057
Total	0.0588	0.2984	0.4019	1.3900e-003	0.0957	2.6900e-003	0.0984	0.0257	2.5500e-003	0.0282		142.3723	142.3723	7.9500e-003			142.5711

3.6 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	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125		4,769.6716	4,769.6716	1.4158			4,805.0671
Total	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125		4,769.6716	4,769.6716	1.4158			4,805.0671

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	0.1290	3.1675	0.9264	6.5200e-003	0.1625	0.0251	0.1876	0.0468	0.0241	0.0708		697.6751	697.6751	0.0604			699.1843
Worker	0.2693	0.1928	1.8185	4.7400e-003	0.4600	3.3100e-003	0.4633	0.1220	3.0500e-003	0.1251		471.7033	471.7033	0.0164			472.1119
Total	0.3983	3.3603	2.7449	0.0113	0.6225	0.0285	0.6510	0.1688	0.0271	0.1959		1,169.3783	1,169.3783	0.0767			1,171.2963

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125	0.0000	4,769.6716	4,769.6716	1.4158		4,805.0670
Total	3.5121	36.5596	26.3646	0.0488		1.8532	1.8532		1.7125	1.7125	0.0000	4,769.6716	4,769.6716	1.4158		4,805.0670

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	0.1290	3.1675	0.9264	6.5200e-003	0.1625	0.0251	0.1876	0.0468	0.0241	0.0708		697.6751	697.6751	0.0604		699.1843
Worker	0.2693	0.1928	1.8185	4.7400e-003	0.4600	3.3100e-003	0.4633	0.1220	3.0500e-003	0.1251		471.7033	471.7033	0.0164		472.1119
Total	0.3983	3.3603	2.7449	0.0113	0.6225	0.0285	0.6510	0.1688	0.0271	0.1959		1,169.3783	1,169.3783	0.0767		1,171.2963

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.9722	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218		9,752.7958	9,752.7958	2.9671		9,826.9741
Paving	0.3228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	8.2950	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218		9,752.7958	9,752.7958	2.9671		9,826.9741

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.2885	0.2066	1.9484	5.0800e-003	0.4929	3.5500e-003	0.4964	0.1307	3.2700e-003	0.1340		505.3964	505.3964	0.0175		505.8342
Total	0.2992	0.4705	2.0256	5.6200e-003	0.5064	5.6500e-003	0.5121	0.1346	5.2700e-003	0.1399		563.5360	563.5360	0.0225		564.0996

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.9722	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218	0.0000	9,752.7958	9,752.7958	2.9671		9,826.9741
Paving	0.3228					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	8.2950	82.6959	59.5819	0.0983		4.3633	4.3633		4.0218	4.0218	0.0000	9,752.7958	9,752.7958	2.9671		9,826.9741

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	0.0108	0.2640	0.0772	5.4000e-004	0.0135	2.1000e-003	0.0156	3.9000e-003	2.0000e-003	5.9000e-003		58.1396	58.1396	5.0300e-003		58.2654
Worker	0.2885	0.2066	1.9484	5.0800e-003	0.4929	3.5500e-003	0.4964	0.1307	3.2700e-003	0.1340		505.3964	505.3964	0.0175		505.8342
Total	0.2992	0.4705	2.0256	5.6200e-003	0.5064	5.6500e-003	0.5121	0.1346	5.2700e-003	0.1399		563.5360	563.5360	0.0225		564.0996

Appendix A, Air Quality Worksheets and Greenhouse Gas Emissions Data Worksheets

Construction Emissions

- CalEEMod Output (Annual)

Oceanside Coast Highway Corridor Study - Construction - San Diego County APCD Air District, Annual

Oceanside Coast Highway Corridor Study - Construction
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - See AQ Model Inputs

Off-road Equipment -

Off-road Equipment - See AQ Model Inputs (Assumes 2 roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Off-road Equipment - See AQ Model Inputs (Assumes 2 Roundabouts)

Trips and VMT - See AQ model inputs (Vendor trip for water trucks)

Grading - See AQ Model Inputs (Assumes 2 Roundabouts)

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	230.00	25.00
tblConstructionPhase	NumDays	20.00	13.00
tblConstructionPhase	NumDays	8.00	13.00
tblConstructionPhase	NumDays	18.00	25.00
tblConstructionPhase	NumDays	5.00	13.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	12/31/2017	3/1/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	3/30/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/15/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	2/14/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	4/28/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	1/30/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	2/15/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	3/2/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/31/2018

tblConstructionPhase	PhaseStartDate	1/1/2018	3/31/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/16/2018
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	AcresOfGrading	0.00	0.23
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialImported	0.00	833.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	130.00	125.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	132.00	130.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	78.00	80.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	203.00	199.00
tblOffRoadEquipment	HorsePower	158.00	162.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	OffRoadEquipmentType	Air Compressors	Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment

tblOffRoadEquipment	OffRoadEquipmentType			Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType			Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType			Excavators
tblOffRoadEquipment	OffRoadEquipmentType			Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType			Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType			Trenchers
tblOffRoadEquipment	OffRoadEquipmentType			Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType			Excavators
tblOffRoadEquipment	OffRoadEquipmentType			Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType			Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tblOffRoadEquipment	OffRoadEquipmentType			Excavators
tblOffRoadEquipment	OffRoadEquipmentType			Forklifts
tblOffRoadEquipment	OffRoadEquipmentType			Graders
tblOffRoadEquipment	OffRoadEquipmentType			Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	7.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	22.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2463	2.4503	1.7801	3.4200e-003	0.0240	0.1232	0.1471	6.3900e-003	0.1144	0.1208	0.0000	307.6590	307.6590	0.0780	0.0000	309.6099
Maximum	0.2463	2.4503	1.7801	3.4200e-003	0.0240	0.1232	0.1471	6.3900e-003	0.1144	0.1208	0.0000	307.6590	307.6590	0.0780	0.0000	309.6099

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	0.2463	2.4503	1.7801	3.4200e-003	0.0237	0.1232	0.1469	6.3500e-003	0.1144	0.1208	0.0000	307.6587	307.6587	0.0780	0.0000	309.6096
Maximum	0.2463	2.4503	1.7801	3.4200e-003	0.0237	0.1232	0.1469	6.3500e-003	0.1144	0.1208	0.0000	307.6587	307.6587	0.0780	0.0000	309.6096

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	1.17	0.00	0.19	0.63	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/15/2018	6	13	
2	Site Preparation	Site Preparation	1/16/2018	1/30/2018	6	13	
3	Grading	Grading	1/31/2018	2/14/2018	6	13	
4	Utility Trenching	Trenching	2/15/2018	3/1/2018	6	13	
5	Building Construction	Building Construction	3/2/2018	3/30/2018	6	25	
6	Paving	Paving	3/31/2018	4/28/2018	6	25	

Acres of Grading (Site Preparation Phase): 0.23

Acres of Grading (Grading Phase): 0.23

Acres of Paving: 3.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Utility Trenching	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Demolition	Concrete/Industrial Saws	2	10.00	81	0.73
Demolition	Excavators	2	10.00	162	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Grading	Excavators	2	10.00	162	0.38
Paving	Pavers	2	10.00	125	0.42
Paving	Rollers	2	10.00	80	0.38
Demolition	Rubber Tired Loaders	2	10.00	199	0.36
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	4	10.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Paving	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	4	10.00	130	0.36
Site Preparation	Rubber Tired Loaders	2	10.00	199	0.36

Building Construction	Welders	0	8.00	46	0.45
Demolition	Crushing/Proc. Equipment	2	10.00	85	0.78
Demolition	Signal Boards	4	10.00	6	0.82
Demolition	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Site Preparation	Signal Boards	4	10.00	6	0.82
Site Preparation	Excavators	2	10.00	162	0.38
Grading	Plate Compactors	2	10.00	8	0.43
Grading	Signal Boards	4	10.00	6	0.82
Grading	Rubber Tired Loaders	2	10.00	199	0.36
Utility Trenching	Trenchers	2	10.00	80	0.50
Building Construction	Signal Boards	4	10.00	6	0.82
Building Construction	Excavators	2	10.00	162	0.38
Building Construction	Plate Compactors	2	10.00	8	0.43
Building Construction	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Signal Boards	4	10.00	6	0.82
Paving	Rubber Tired Loaders	2	10.00	199	0.36
Paving	Excavators	2	10.00	162	0.38
Paving	Forklifts	2	10.00	89	0.20
Paving	Graders	2	10.00	174	0.41
Paving	Plate Compactors	2	10.00	8	0.43
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

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
Utility Trenching	4	10.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	14	56.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	14	35.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	2.00	104.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	24	60.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	25.00	2.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

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	0.0373	0.3282	0.2620	4.7000e-004		0.0186	0.0186		0.0179	0.0179	0.0000	41.5394	41.5394	8.4300e-003	0.0000	41.7503
Total	0.0373	0.3282	0.2620	4.7000e-004		0.0186	0.0186		0.0179	0.0179	0.0000	41.5394	41.5394	8.4300e-003	0.0000	41.7503

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	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	9.7000e-004	7.7000e-004	7.3800e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.7558	1.7558	6.0000e-005	0.0000	1.7573
Total	1.0400e-003	2.5100e-003	7.8600e-003	2.0000e-005	1.9100e-003	2.0000e-005	1.9400e-003	5.0000e-004	2.0000e-005	5.4000e-004	0.0000	2.1038	2.1038	9.0000e-005	0.0000	2.1060

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	0.0373	0.3282	0.2620	4.7000e-004		0.0186	0.0186		0.0179	0.0179	0.0000	41.5394	41.5394	8.4300e-003	0.0000	41.7502
Total	0.0373	0.3282	0.2620	4.7000e-004		0.0186	0.0186		0.0179	0.0179	0.0000	41.5394	41.5394	8.4300e-003	0.0000	41.7502

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	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	9.7000e-004	7.7000e-004	7.3800e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8400e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.7558	1.7558	6.0000e-005	0.0000	1.7573
Total	1.0400e-003	2.5100e-003	7.8600e-003	2.0000e-005	1.9100e-003	2.0000e-005	1.9400e-003	5.0000e-004	2.0000e-005	5.4000e-004	0.0000	2.1038	2.1038	9.0000e-005	0.0000	2.1060

3.3 Site Preparation - 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					3.3000e-004	0.0000	3.3000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0179	0.1908	0.1300	2.6000e-004		8.8600e-003	8.8600e-003		8.1900e-003	8.1900e-003	0.0000	23.0062	23.0062	6.8600e-003	0.0000	23.1777
Total	0.0179	0.1908	0.1300	2.6000e-004	3.3000e-004	8.8600e-003	9.1900e-003	5.0000e-005	8.1900e-003	8.2400e-003	0.0000	23.0062	23.0062	6.8600e-003	0.0000	23.1777

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	1.7400e-003	0.0609	0.0127	1.5000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1100e-003	0.0000	14.7756	14.7756	1.3300e-003	0.0000	14.8090
Vendor	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	6.9000e-004	5.5000e-004	5.2700e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2541	1.2541	4.0000e-005	0.0000	1.2552
Total	2.5000e-003	0.0632	0.0185	1.6000e-004	4.6000e-003	2.6000e-004	4.8600e-003	1.2500e-003	2.5000e-004	1.5100e-003	0.0000	16.3777	16.3777	1.4000e-003	0.0000	16.4128

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					1.5000e-004	0.0000	1.5000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0179	0.1908	0.1300	2.6000e-004		8.8600e-003	8.8600e-003		8.1900e-003	8.1900e-003	0.0000	23.0062	23.0062	6.8600e-003	0.0000	23.1777
Total	0.0179	0.1908	0.1300	2.6000e-004	1.5000e-004	8.8600e-003	9.0100e-003	2.0000e-005	8.1900e-003	8.2100e-003	0.0000	23.0062	23.0062	6.8600e-003	0.0000	23.1777

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	1.7400e-003	0.0609	0.0127	1.5000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1100e-003	0.0000	14.7756	14.7756	1.3300e-003	0.0000	14.8090
Vendor	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	6.9000e-004	5.5000e-004	5.2700e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.2541	1.2541	4.0000e-005	0.0000	1.2552
Total	2.5000e-003	0.0632	0.0185	1.6000e-004	4.6000e-003	2.6000e-004	4.8600e-003	1.2500e-003	2.5000e-004	1.5100e-003	0.0000	16.3777	16.3777	1.4000e-003	0.0000	16.4128

3.4 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					1.8000e-004	0.0000	1.8000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1949	0.1334	2.7000e-004		9.0200e-003	9.0200e-003		8.3500e-003	8.3500e-003	0.0000	23.5145	23.5145	6.9100e-003	0.0000	23.6873
Total	0.0185	0.1949	0.1334	2.7000e-004	1.8000e-004	9.0200e-003	9.2000e-003	2.0000e-005	8.3500e-003	8.3700e-003	0.0000	23.5145	23.5145	6.9100e-003	0.0000	23.6873

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	4.8000e-004	0.0169	3.5200e-003	4.0000e-005	8.9000e-004	7.0000e-005	9.6000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	4.0978	4.0978	3.7000e-004	0.0000	4.1070
Vendor	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	8.3000e-004	6.6000e-004	6.3300e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.5050	1.5050	5.0000e-005	0.0000	1.5063
Total	1.3800e-003	0.0193	0.0103	6.0000e-005	2.5400e-003	9.0000e-005	2.6400e-003	6.8000e-004	8.0000e-005	7.8000e-004	0.0000	5.9507	5.9507	4.5000e-004	0.0000	5.9620

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					8.0000e-005	0.0000	8.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0185	0.1949	0.1334	2.7000e-004		9.0200e-003	9.0200e-003		8.3500e-003	8.3500e-003	0.0000	23.5144	23.5144	6.9100e-003	0.0000	23.6873
Total	0.0185	0.1949	0.1334	2.7000e-004	8.0000e-005	9.0200e-003	9.1000e-003	1.0000e-005	8.3500e-003	8.3600e-003	0.0000	23.5144	23.5144	6.9100e-003	0.0000	23.6873

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	4.8000e-004	0.0169	3.5200e-003	4.0000e-005	8.9000e-004	7.0000e-005	9.6000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	4.0978	4.0978	3.7000e-004	0.0000	4.1070
Vendor	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	8.3000e-004	6.6000e-004	6.3300e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.5050	1.5050	5.0000e-005	0.0000	1.5063
Total	1.3800e-003	0.0193	0.0103	6.0000e-005	2.5400e-003	9.0000e-005	2.6400e-003	6.8000e-004	8.0000e-005	7.8000e-004	0.0000	5.9507	5.9507	4.5000e-004	0.0000	5.9620

3.5 Utility Trenching - 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	0.0119	0.1106	0.0822	1.1000e-004		8.1900e-003	8.1900e-003		7.5300e-003	7.5300e-003	0.0000	9.7455	9.7455	3.0300e-003	0.0000	9.8214
Total	0.0119	0.1106	0.0822	1.1000e-004		8.1900e-003	8.1900e-003		7.5300e-003	7.5300e-003	0.0000	9.7455	9.7455	3.0300e-003	0.0000	9.8214

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	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	2.8000e-004	2.2000e-004	2.1100e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5017	0.5017	2.0000e-005	0.0000	0.5021
Total	3.5000e-004	1.9600e-003	2.5900e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.3000e-004	1.6000e-004	1.0000e-005	1.8000e-004	0.0000	0.8496	0.8496	5.0000e-005	0.0000	0.8508

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	0.0119	0.1106	0.0822	1.1000e-004		8.1900e-003	8.1900e-003		7.5300e-003	7.5300e-003	0.0000	9.7455	9.7455	3.0300e-003	0.0000	9.8213
Total	0.0119	0.1106	0.0822	1.1000e-004		8.1900e-003	8.1900e-003		7.5300e-003	7.5300e-003	0.0000	9.7455	9.7455	3.0300e-003	0.0000	9.8213

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	7.0000e-005	1.7400e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3480	0.3480	3.0000e-005	0.0000	0.3487
Worker	2.8000e-004	2.2000e-004	2.1100e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5017	0.5017	2.0000e-005	0.0000	0.5021
Total	3.5000e-004	1.9600e-003	2.5900e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.3000e-004	1.6000e-004	1.0000e-005	1.8000e-004	0.0000	0.8496	0.8496	5.0000e-005	0.0000	0.8508

3.6 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	0.0439	0.4570	0.3296	6.1000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	54.0872	54.0872	0.0161	0.0000	54.4885
Total	0.0439	0.4570	0.3296	6.1000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	54.0872	54.0872	0.0161	0.0000	54.4885

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	1.5700e-003	0.0401	0.0110	8.0000e-005	1.9900e-003	3.1000e-004	2.3000e-003	5.7000e-004	3.0000e-004	8.7000e-004	0.0000	8.0298	8.0298	6.6000e-004	0.0000	8.0463
Worker	2.9900e-003	2.3700e-003	0.0227	6.0000e-005	5.6100e-003	4.0000e-005	5.6500e-003	1.4900e-003	4.0000e-005	1.5300e-003	0.0000	5.4024	5.4024	1.9000e-004	0.0000	5.4071
Total	4.5600e-003	0.0424	0.0337	1.4000e-004	7.6000e-003	3.5000e-004	7.9500e-003	2.0600e-003	3.4000e-004	2.4000e-003	0.0000	13.4322	13.4322	8.5000e-004	0.0000	13.4534

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	0.0439	0.4570	0.3296	6.1000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	54.0871	54.0871	0.0161	0.0000	54.4885
Total	0.0439	0.4570	0.3296	6.1000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	54.0871	54.0871	0.0161	0.0000	54.4885

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	1.5700e-003	0.0401	0.0110	8.0000e-005	1.9900e-003	3.1000e-004	2.3000e-003	5.7000e-004	3.0000e-004	8.7000e-004	0.0000	8.0298	8.0298	6.6000e-004	0.0000	8.0463
Worker	2.9900e-003	2.3700e-003	0.0227	6.0000e-005	5.6100e-003	4.0000e-005	5.6500e-003	1.4900e-003	4.0000e-005	1.5300e-003	0.0000	5.4024	5.4024	1.9000e-004	0.0000	5.4071
Total	4.5600e-003	0.0424	0.0337	1.4000e-004	7.6000e-003	3.5000e-004	7.9500e-003	2.0600e-003	3.4000e-004	2.4000e-003	0.0000	13.4322	13.4322	8.5000e-004	0.0000	13.4534

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0997	1.0337	0.7448	1.2300e-003		0.0545	0.0545		0.0503	0.0503	0.0000	110.5948	110.5948	0.0337	0.0000	111.4360
Paving	4.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1037	1.0337	0.7448	1.2300e-003		0.0545	0.0545		0.0503	0.0503	0.0000	110.5948	110.5948	0.0337	0.0000	111.4360

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	1.3000e-004	3.3400e-003	9.2000e-004	1.0000e-005	1.7000e-004	3.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6692	0.6692	6.0000e-005	0.0000	0.6705
Worker	3.2100e-003	2.5400e-003	0.0243	6.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.7883	5.7883	2.0000e-004	0.0000	5.7933
Total	3.3400e-003	5.8800e-003	0.0253	7.0000e-005	6.1800e-003	7.0000e-005	6.2500e-003	1.6500e-003	6.0000e-005	1.7100e-003	0.0000	6.4575	6.4575	2.6000e-004	0.0000	6.4638

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	0.0997	1.0337	0.7448	1.2300e-003		0.0545	0.0545		0.0503	0.0503	0.0000	110.5947	110.5947	0.0337	0.0000	111.4359
Paving	4.0300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1037	1.0337	0.7448	1.2300e-003		0.0545	0.0545		0.0503	0.0503	0.0000	110.5947	110.5947	0.0337	0.0000	111.4359

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	1.3000e-004	3.3400e-003	9.2000e-004	1.0000e-005	1.7000e-004	3.0000e-005	1.9000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.6692	0.6692	6.0000e-005	0.0000	0.6705
Worker	3.2100e-003	2.5400e-003	0.0243	6.0000e-005	6.0100e-003	4.0000e-005	6.0600e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	5.7883	5.7883	2.0000e-004	0.0000	5.7933
Total	3.3400e-003	5.8800e-003	0.0253	7.0000e-005	6.1800e-003	7.0000e-005	6.2500e-003	1.6500e-003	6.0000e-005	1.7100e-003	0.0000	6.4575	6.4575	2.6000e-004	0.0000	6.4638

A-2 Overlay Construction Scenarios - Emissions Calculations and Model Output

**Construction
Summary**

Oceanside Overlay Construction Modeling

Construction:

Scenario							CO2e	
	ROG	NOx	CO	SOx	PM10	PM2.5	Total	Amortized
Threshold	75	250	550	250	100	55		
1a	34.0482	33.4728	26.6399	0.0453	3.0408	2.0637	163.3926	5.44642
1b	2	7	20		32	26		
2a	12.2173	33.4728	26.6399	0.0453	3.0408	2.0637	163.3926	5.44642
2b	6	7	20		32	26		
3a	12.3669	49.2481	36.4199	0.0597	4.7027	3.1084		
3b	6	5	15		21	17		
4a	81.4082	56.7834	46.9641	0.0938	5.8831	3.5997		
4b	0	4	11		16	15		
5a	26.8311	56.7834	46.9641	0.0938	5.8831	3.5997	868.7526	28.95842
5b	2	4	11		16	15		
6a	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	14.38537
6b	3	5	15		23	20		

a= Emissions from modeling

b= Number of lots that can be active per day based on emissions

Assumptions:

- 1 1 acre; 65 units; 30,000 sqft retail; 20,000 sq ft Demo; 90 day arch coating; Fugitive dust reduction; no mitigation
- 2 1 acre; 65 units; 30,000 sqft retail; 20,000 sq ft Demo; 90 day arch coating; Fugitive dust reduction; 10 g/l indoor architecture
- 3 5 acre; 65 units; 30,000 sqft retail; 20,000 sq ft Demo; 90 day arch coating; Fugitive dust reduction; 10 g/l indoor architecture
- 4 5 acre; 325 units; 150,000 sqft retail; 100,000 sq ft Demo; 180 day arch coating; Fugitive dust reduction; 250 g/l indoor architecture
- 5 5 acre; 325 units; 150,000 sqft retail; 100,000 sq ft Demo; 180 day arch coating; Fugitive dust reduction; 10 g/l indoor architecture
- 6 2 acre; 130 units; 60,000 sqft retail; 40,000 sqft demo; 90 days arch coating; fugitive dust reduction; 10 g/l indoor architecture.

Acres	ROG	NOx	CO	SOx	PM10	PM2.5	CO2e	Amortized CO2e
5	26.8311	56.7834	46.9641	0.0938	5.8831	3.5997	868.7526	
1	12.2173	33.4728	26.6399	0.0453	3.0408	2.0637	163.3926	
1	12.2173	33.4728	26.6399	0.0453	3.0408	2.0637	163.3926	
1	12.2173	33.4728	26.6399	0.0453	3.0408	2.0637	163.3926	
Total	63.483	157.2018	126.8838	0.2297	15.0055	9.7908	490.1778	16.34

Acres	ROG	NOx	CO	SOx	PM10	PM2.5	CO2e	Amortized CO2e
5	26.8311	56.7834	46.9641	0.0938	5.8831	3.5997	868.7526	
2	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	
2	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	
Total	69.8795	143.9798	115.7435	0.2166	14.2479	9.0437	1731.875	57.73

Acres	ROG	NOx	CO	SOx	PM10	PM2.5	CO2e	Amortized CO2e
2	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	
2	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	
2	21.5242	43.5982	34.3897	0.0614	4.1824	2.722	431.561	
Total	64.5726	130.7946	103.1691	0.1842	12.5472	8.166	1294.683	43.16

Acres	ROG	NOx	CO	SOx	PM10	PM2.5	CO2e	Amortized CO2e
5	26.8311	56.7834	46.9641	0.0938	5.8831	3.5997	868.7526	
5	26.8311	56.7834	46.9641	0.0938	5.8831	3.5997	868.7526	
Total	53.6622	113.5668	93.9282	0.1876	11.7662	7.1994	1737.505	57.92

**Construction
Scenario 1
CalEEMod**

Oceanside Construction Overlay - San Diego County, Winter

**Oceanside Construction Overlay
S1 - San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/4/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/6/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/7/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/1/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/1/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	34.0482	33.4728	26.5658	0.0449	4.9800	1.9932	5.8542	2.5430	1.8900	3.3473	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129
Maximum	34.0482	33.4728	26.5658	0.0449	4.9800	1.9932	5.8542	2.5430	1.8900	3.3473	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129

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					
2017	34.0482	33.4728	26.5658	0.0449	2.1666	1.9932	3.0408	1.0971	1.8900	2.0637	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129
Maximum	34.0482	33.4728	26.5658	0.0449	2.1666	1.9932	3.0408	1.0971	1.8900	2.0637	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.49	0.00	48.06	56.86	0.00	38.35	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/18/2017	6/6/2017	5	100	
2	Demolition	Demolition	1/1/2017	1/13/2017	5	10	
3	Grading	Grading	1/14/2017	1/17/2017	5	2	
4	Architectural Coating	Architectural Coating	6/1/2017	10/4/2017	5	90	
5	Paving	Paving	2/1/2017	2/7/2017	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

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	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

3.3 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299

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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000

Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	4.9143	0.8738	5.7880	2.5256	0.8039	3.3295		1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	2.1008	0.8738	2.9746	1.0797	0.8039	1.8836	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

3.5 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	30.3206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	30.6529	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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
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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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246	95.3390	95.3390	3.6000e-003	95.4289		
Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246	95.3390	95.3390	3.6000e-003	95.4289		

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	30.3206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	30.6529	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289
Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796

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	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796

4.0 Operational Detail - Mobile

Oceanside Construction Overlay - San Diego County, Summer

Oceanside Construction Overlay
S1 - San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/4/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/6/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/7/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/1/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/1/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	34.0047	33.4381	26.6399	0.0453	4.9800	1.9930	5.8542	2.5430	1.8897	3.3473	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295
Maximum	34.0047	33.4381	26.6399	0.0453	4.9800	1.9930	5.8542	2.5430	1.8897	3.3473	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295

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					
2017	34.0047	33.4381	26.6399	0.0453	2.1666	1.9930	3.0408	1.0971	1.8897	2.0635	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295
Maximum	34.0047	33.4381	26.6399	0.0453	2.1666	1.9930	3.0408	1.0971	1.8897	2.0635	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.49	0.00	48.06	56.86	0.00	38.36	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/18/2017	6/6/2017	5	100	
2	Demolition	Demolition	1/1/2017	1/13/2017	5	10	
3	Grading	Grading	1/14/2017	1/17/2017	5	2	
4	Architectural Coating	Architectural Coating	6/1/2017	10/4/2017	5	90	
5	Paving	Paving	2/1/2017	2/7/2017	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297		359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489		877.0884

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	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297		359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489		877.0884

3.3 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911
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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070

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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911
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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000

Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	4.9143	0.8738	5.7880	2.5256	0.8039	3.3295		1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175
Total	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	2.1008	0.8738	2.9746	1.0797	0.8039	1.8836	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003			73.9175
Total	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003			73.9175

3.5 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Archit. Coating	30.3206					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.1909
Total	30.6529	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297			282.1909

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
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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	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
Worker	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003	101.6366
Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003	101.6366

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	30.3206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	30.6529	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366
Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159

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	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159

4.0 Operational Detail - Mobile

Oceanside - Overlay - San Diego County, Annual

Oceanside - Overlay
Senario 1 - San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - see assumptions

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/13/2017

tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/24/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/10/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/25/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	1.5658	1.3418	1.0590	1.8700e-003	0.0362	0.0813	0.1175	0.0109	0.0783	0.0893	0.0000	162.7121	162.7121	0.0272	0.0000	163.3926
Maximum	1.5658	1.3418	1.0590	1.8700e-003	0.0362	0.0813	0.1175	0.0109	0.0783	0.0893	0.0000	162.7121	162.7121	0.0272	0.0000	163.3926

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
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Year	tons/yr										MT/yr					
2017	1.5658	1.3418	1.0590	1.8700e-003	0.0334	0.0813	0.1147	9.4800e-003	0.0783	0.0878	0.0000	162.7120	162.7120	0.0272	0.0000	163.3925
Maximum	1.5658	1.3418	1.0590	1.8700e-003	0.0334	0.0813	0.1147	9.4800e-003	0.0783	0.0878	0.0000	162.7120	162.7120	0.0272	0.0000	163.3925

	ROG	NOx	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	7.80	0.00	2.39	13.19	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	0.7774	0.7774
2	4-1-2017	6-30-2017	0.8925	0.8925
3	7-1-2017	9-30-2017	1.0819	1.0819
		Highest	1.0819	1.0819

2.2 Overall Operational

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	1/1/2017	1/13/2017	5	10	
2	Grading	Grading	1/14/2017	1/17/2017	5	2	
3	Paving	Paving	1/18/2017	1/24/2017	5	5	
4	Building Construction	Building Construction	1/25/2017	6/13/2017	5	100	
5	Architectural Coating	Architectural Coating	6/10/2017	10/13/2017	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528
Total	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528

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	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167

Total	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167
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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	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528
Total	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528

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	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167
Total	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9100e-003	0.0000	4.9100e-003	2.5300e-003	0.0000	2.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6000e-003	0.0183	7.0300e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208
Total	1.6000e-003	0.0183	7.0300e-003	1.0000e-005	4.9100e-003	8.7000e-004	5.7800e-003	2.5300e-003	8.0000e-004	3.3300e-003	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636
Total	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636

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					2.1000e-003	0.0000	2.1000e-003	1.0800e-003	0.0000	1.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6000e-003	0.0183	7.0300e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208
Total	1.6000e-003	0.0183	7.0300e-003	1.0000e-005	2.1000e-003	8.7000e-004	2.9700e-003	1.0800e-003	8.0000e-004	1.8800e-003	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636
Total	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636

3.4 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0000e-003	0.0307	0.0229	3.0000e-005		1.8500e-003	1.8500e-003		1.7100e-003	1.7100e-003	0.0000	3.1022	3.1022	9.3000e-004	0.0000	3.1255
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-003	0.0307	0.0229	3.0000e-005		1.8500e-003	1.8500e-003		1.7100e-003	1.7100e-003	0.0000	3.1022	3.1022	9.3000e-004	0.0000	3.1255

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.2000e-004	1.1900e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2581	0.2581	1.0000e-005	0.0000	0.2583
Total	1.5000e-004	1.2000e-004	1.1900e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2581	0.2581	1.0000e-005	0.0000	0.2583

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	3.0000e-003	0.0307	0.0229	3.0000e-005		1.8500e-003	1.8500e-003		1.7100e-003	1.7100e-003	0.0000	3.1022	3.1022	9.3000e-004	0.0000	3.1255
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-003	0.0307	0.0229	3.0000e-005		1.8500e-003	1.8500e-003		1.7100e-003	1.7100e-003	0.0000	3.1022	3.1022	9.3000e-004	0.0000	3.1255

Mitigated Construction Off-Site

Vendor	3.6300e-003	0.0859	0.0244	1.7000e-004	3.9800e-003	7.9000e-004	4.7800e-003	1.1500e-003	7.6000e-004	1.9100e-003	0.0000	16.1143	16.1143	1.3900e-003	0.0000	16.1489
Worker	0.0132	0.0107	0.1029	2.5000e-004	0.0225	1.7000e-004	0.0226	5.9700e-003	1.6000e-004	6.1200e-003	0.0000	22.2351	22.2351	8.3000e-004	0.0000	22.2560
Total	0.0169	0.0966	0.1273	4.2000e-004	0.0264	9.6000e-004	0.0274	7.1200e-003	9.2000e-004	8.0300e-003	0.0000	38.3494	38.3494	2.2200e-003	0.0000	38.4049

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	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7080	92.7080	0.0195	0.0000	93.1954
Total	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7080	92.7080	0.0195	0.0000	93.1954

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	3.6300e-003	0.0859	0.0244	1.7000e-004	3.9800e-003	7.9000e-004	4.7800e-003	1.1500e-003	7.6000e-004	1.9100e-003	0.0000	16.1143	16.1143	1.3900e-003	0.0000	16.1489
Worker	0.0132	0.0107	0.1029	2.5000e-004	0.0225	1.7000e-004	0.0226	5.9700e-003	1.6000e-004	6.1200e-003	0.0000	22.2351	22.2351	8.3000e-004	0.0000	22.2560
Total	0.0169	0.0966	0.1273	4.2000e-004	0.0264	9.6000e-004	0.0274	7.1200e-003	9.2000e-004	8.0300e-003	0.0000	38.3494	38.3494	2.2200e-003	0.0000	38.4049

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3644					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
Total	1.3794	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

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	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345
Total	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3644					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
Total	1.3794	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

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	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345
Total	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345

4.0 Operational Detail - Mobile

**Construction
Scenario 2
CalEEMod**

Oceanside Construction Overlay - San Diego County, Winter

**Oceanside Construction Overlay
S2 - San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/4/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/6/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/7/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/1/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/1/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	12.2173	33.4728	26.5658	0.0449	4.9800	1.9932	5.8542	2.5430	1.8900	3.3473	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129
Maximum	12.2173	33.4728	26.5658	0.0449	4.9800	1.9932	5.8542	2.5430	1.8900	3.3473	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129

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					
2017	12.2173	33.4728	26.5658	0.0449	2.1666	1.9932	3.0408	1.0971	1.8900	2.0637	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129
Maximum	12.2173	33.4728	26.5658	0.0449	2.1666	1.9932	3.0408	1.0971	1.8900	2.0637	0.0000	4,359.9286	4,359.9286	0.8954	0.0000	4,382.3129

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.49	0.00	48.06	56.86	0.00	38.35	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/18/2017	6/6/2017	5	100	
2	Demolition	Demolition	1/1/2017	1/13/2017	5	10	
3	Grading	Grading	1/14/2017	1/17/2017	5	2	

4	Architectural Coating	Architectural Coating	6/1/2017	10/4/2017	5	90
5	Paving	Paving	2/1/2017	2/7/2017	5	5

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

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	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0000	0.0000
Vendor	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

3.3 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796

Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299
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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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	4.9143	0.8738	5.7880	2.5256	0.8039	3.3295		1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

Mitigated Construction On-Site

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

Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	2.1008	0.8738	2.9746	1.0797	0.8039	1.8836	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029
Total	0.0425	0.0312	0.2947	7.0000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		69.3375	69.3375	2.6200e-003		69.4029

3.5 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289
Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289

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	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289
Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796

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	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796

4.0 Operational Detail - Mobile

Oceanside Construction Overlay - San Diego County, Summer

**Oceanside Construction Overlay
S2 - San Diego County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/4/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/6/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/7/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/1/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/1/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	12.1738	33.4381	26.6399	0.0453	4.9800	1.9930	5.8542	2.5430	1.8897	3.3473	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295
Maximum	12.1738	33.4381	26.6399	0.0453	4.9800	1.9930	5.8542	2.5430	1.8897	3.3473	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295

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					
2017	12.1738	33.4381	26.6399	0.0453	2.1666	1.9930	3.0408	1.0971	1.8897	2.0635	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295
Maximum	12.1738	33.4381	26.6399	0.0453	2.1666	1.9930	3.0408	1.0971	1.8897	2.0635	0.0000	4,407.5662	4,407.5662	0.8945	0.0000	4,429.9295

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.49	0.00	48.06	56.86	0.00	38.36	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	1/18/2017	6/6/2017	5	100	
2	Demolition	Demolition	1/1/2017	1/13/2017	5	10	
3	Grading	Grading	1/14/2017	1/17/2017	5	2	

4	Architectural Coating	Architectural Coating	6/1/2017	10/4/2017	5	90
5	Paving	Paving	2/1/2017	2/7/2017	5	5

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875		2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297		359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489		877.0884

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	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085
Total	2.9653	19.2365	14.3568	0.0220		1.2313	1.2313		1.1875	1.1875	0.0000	2,043.8641	2,043.8641	0.4298		2,054.6085

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	0.0000	0.0000
Vendor	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297		359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489		877.0884

3.3 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911
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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159

Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070
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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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911
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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039		1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	4.9143	0.8738	5.7880	2.5256	0.8039	3.3295		1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175
Total	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175

Mitigated Construction On-Site

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

Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	1.6023	18.2915	7.0342	0.0141		0.8738	0.8738		0.8039	0.8039	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636
Total	1.6023	18.2915	7.0342	0.0141	2.1008	0.8738	2.9746	1.0797	0.8039	1.8836	0.0000	1,444.8958	1,444.8958	0.4427		1,455.9636

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	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175
Total	0.0376	0.0277	0.3088	7.4000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.5000e-004	0.0179		73.8490	73.8490	2.7400e-003		73.9175

3.5 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366
Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366

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	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366
Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832		1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159

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	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2008	12.2685	9.1549	0.0135		0.7417	0.7417		0.6832	0.6832	0.0000	1,367.8311	1,367.8311	0.4114		1,378.1167

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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159

4.0 Operational Detail - Mobile

Oceanside - Overlay - San Diego County, Annual

Oceanside - Overlay
S2 - San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	0.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Construction Off-road Equipment Mitigation -
- Architectural Coating - See Assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

tblConstructionPhase	NumDays	5.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	10/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	6/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/13/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/17/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/24/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	6/10/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/25/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/14/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/18/2017
tblLandUse	LotAcreage	1.71	0.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	0.5834	1.3418	1.0590	1.8700e-003	0.0362	0.0813	0.1175	0.0109	0.0783	0.0893	0.0000	162.7121	162.7121	0.0272	0.0000	163.3926
Maximum	0.5834	1.3418	1.0590	1.8700e-003	0.0362	0.0813	0.1175	0.0109	0.0783	0.0893	0.0000	162.7121	162.7121	0.0272	0.0000	163.3926

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					
2017	0.5834	1.3418	1.0590	1.8700e-003	0.0334	0.0813	0.1147	9.4800e-003	0.0783	0.0878	0.0000	162.7120	162.7120	0.0272	0.0000	163.3925
Maximum	0.5834	1.3418	1.0590	1.8700e-003	0.0334	0.0813	0.1147	9.4800e-003	0.0783	0.0878	0.0000	162.7120	162.7120	0.0272	0.0000	163.3925

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	7.80	0.00	2.39	13.19	0.00	1.61	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	0.7774	0.7774
2	4-1-2017	6-30-2017	0.7287	0.7287
3	7-1-2017	9-30-2017	0.3646	0.3646
		Highest	0.7774	0.7774

2.2 Overall Operational

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	1/1/2017	1/13/2017	5	10	
2	Grading	Grading	1/14/2017	1/17/2017	5	2	
3	Paving	Paving	1/18/2017	1/24/2017	5	5	
4	Building Construction	Building Construction	1/25/2017	6/13/2017	5	100	
5	Architectural Coating	Architectural Coating	6/10/2017	10/13/2017	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	7	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528
Total	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528

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
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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
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	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167
Total	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167

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	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528
Total	0.0138	0.1338	0.0778	1.2000e-004		8.2400e-003	8.2400e-003		7.7000e-003	7.7000e-003	0.0000	10.9834	10.9834	2.7800e-003	0.0000	11.0528

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	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167
Total	3.1000e-004	2.5000e-004	2.3900e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.5162	0.5162	2.0000e-005	0.0000	0.5167

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9100e-003	0.0000	4.9100e-003	2.5300e-003	0.0000	2.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6000e-003	0.0183	7.0300e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208
Total	1.6000e-003	0.0183	7.0300e-003	1.0000e-005	4.9100e-003	8.7000e-004	5.7800e-003	2.5300e-003	8.0000e-004	3.3300e-003	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636
Total	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636

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					2.1000e-003	0.0000	2.1000e-003	1.0800e-003	0.0000	1.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6000e-003	0.0183	7.0300e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208
Total	1.6000e-003	0.0183	7.0300e-003	1.0000e-005	2.1000e-003	8.7000e-004	2.9700e-003	1.0800e-003	8.0000e-004	1.8800e-003	0.0000	1.3108	1.3108	4.0000e-004	0.0000	1.3208

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	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636
Total	4.0000e-005	3.0000e-005	2.9000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0635	0.0635	0.0000	0.0000	0.0636

3.4 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Total	3.0000e-003	0.0307	0.0229	3.0000e-005		1.8500e-003	1.8500e-003		1.7100e-003	1.7100e-003	0.0000	3.1022	3.1022	9.3000e-004	0.0000	3.1255
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.2000e-004	1.1900e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2581	0.2581	1.0000e-005	0.0000	0.2583
Total	1.5000e-004	1.2000e-004	1.1900e-003	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2581	0.2581	1.0000e-005	0.0000	0.2583

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7081	92.7081	0.0195	0.0000	93.1955
Total	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7081	92.7081	0.0195	0.0000	93.1955

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	3.6300e-003	0.0859	0.0244	1.7000e-004	3.9800e-003	7.9000e-004	4.7800e-003	1.1500e-003	7.6000e-004	1.9100e-003	0.0000	16.1143	16.1143	1.3900e-003	0.0000	16.1489
Worker	0.0132	0.0107	0.1029	2.5000e-004	0.0225	1.7000e-004	0.0226	5.9700e-003	1.6000e-004	6.1200e-003	0.0000	22.2351	22.2351	8.3000e-004	0.0000	22.2560
Total	0.0169	0.0966	0.1273	4.2000e-004	0.0264	9.6000e-004	0.0274	7.1200e-003	9.2000e-004	8.0300e-003	0.0000	38.3494	38.3494	2.2200e-003	0.0000	38.4049

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	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7080	92.7080	0.0195	0.0000	93.1954
Total	0.1483	0.9618	0.7178	1.1000e-003		0.0616	0.0616		0.0594	0.0594	0.0000	92.7080	92.7080	0.0195	0.0000	93.1954

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	3.6300e-003	0.0859	0.0244	1.7000e-004	3.9800e-003	7.9000e-004	4.7800e-003	1.1500e-003	7.6000e-004	1.9100e-003	0.0000	16.1143	16.1143	1.3900e-003	0.0000	16.1489
Worker	0.0132	0.0107	0.1029	2.5000e-004	0.0225	1.7000e-004	0.0226	5.9700e-003	1.6000e-004	6.1200e-003	0.0000	22.2351	22.2351	8.3000e-004	0.0000	22.2560
Total	0.0169	0.0966	0.1273	4.2000e-004	0.0264	9.6000e-004	0.0274	7.1200e-003	9.2000e-004	8.0300e-003	0.0000	38.3494	38.3494	2.2200e-003	0.0000	38.4049

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3820					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
Total	0.3970	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

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	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345

Total	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345
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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	0.3820					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
Total	0.3970	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

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	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345
Total	2.3400e-003	1.8900e-003	0.0182	4.0000e-005	3.9700e-003	3.0000e-005	4.0000e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.9309	3.9309	1.5000e-004	0.0000	3.9345

4.0 Operational Detail - Mobile

**Construction
Scenario 3
CalEEMod**

Oceanside Construction Overlay - San Diego County, Winter

**Oceanside Construction Overlay
S3 - San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	4.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	18.00	90.00
tblConstructionPhase	PhaseEndDate	10/17/2017	12/28/2017
tblConstructionPhase	PhaseEndDate	6/6/2017	12/27/2017
tblConstructionPhase	PhaseEndDate	1/13/2017	1/27/2017
tblConstructionPhase	PhaseEndDate	1/17/2017	2/8/2017
tblConstructionPhase	PhaseEndDate	6/13/2017	3/6/2017
tblConstructionPhase	PhaseStartDate	6/14/2017	8/25/2017
tblConstructionPhase	PhaseStartDate	1/18/2017	2/9/2017
tblConstructionPhase	PhaseStartDate	1/14/2017	1/28/2017
tblConstructionPhase	PhaseStartDate	6/7/2017	2/9/2017
tblLandUse	LotAcreage	1.71	4.31
tblProjectCharacteristics	OperationalYear	2018	2019

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

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

2017	12.3669	49.2481	36.3423	0.0592	6.6756	2.9674	8.4539	3.4002	2.7649	5.0362	0.0000	5,947.1937	5,947.1937	1.4221	0.0000	5,982.7450
Maximum	12.3669	49.2481	36.3423	0.0592	6.6756	2.9674	8.4539	3.4002	2.7649	5.0362	0.0000	5,947.1937	5,947.1937	1.4221	0.0000	5,982.7450

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					
2017	12.3669	49.2481	36.3423	0.0592	2.9243	2.9674	4.7027	1.4723	2.7649	3.1084	0.0000	5,947.1937	5,947.1937	1.4221	0.0000	5,982.7450
Maximum	12.3669	49.2481	36.3423	0.0592	2.9243	2.9674	4.7027	1.4723	2.7649	3.1084	0.0000	5,947.1937	5,947.1937	1.4221	0.0000	5,982.7450

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.19	0.00	44.37	56.70	0.00	38.28	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	

5	Architectural Coating	Architectural Coating	8/25/2017	12/28/2017	5	90
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	9	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9966	0.0000	0.9966	0.1509	0.0000	0.1509			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	0.9966	2.1935	3.1901	0.1509	2.0425	2.1934		3,924.2833	3,924.2833	1.0730		3,951.1070

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
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Category	lb/day										lb/day					
Hauling	0.0503	1.5953	0.3412	3.6400e-003	0.0795	9.0600e-003	0.0886	0.0218	8.6600e-003	0.0305		394.9496	394.9496	0.0370		395.8751
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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.1299	1.6537	0.8936	4.9500e-003	0.2027	9.9700e-003	0.2127	0.0545	9.5000e-003	0.0640		524.9573	524.9573	0.0419		526.0055

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					0.4261	0.0000	0.4261	0.0645	0.0000	0.0645			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	0.4261	2.1935	2.6195	0.0645	2.0425	2.1070	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.0503	1.5953	0.3412	3.6400e-003	0.0795	9.0600e-003	0.0886	0.0218	8.6600e-003	0.0305		394.9496	394.9496	0.0370		395.8751
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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.1299	1.6537	0.8936	4.9500e-003	0.2027	9.9700e-003	0.2127	0.0545	9.5000e-003	0.0640		524.9573	524.9573	0.0419		526.0055

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000				0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308			3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308			3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000				0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308			3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308			3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.0744	1.6993	0.5128	3.2800e-003	0.0812	0.0160	0.0973	0.0234	0.0153	0.0387		350.1979	350.1979	0.0316		350.9882
Worker	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.3716	1.9173	2.5754	8.1600e-003	0.5413	0.0194	0.5607	0.1454	0.0185	0.1639		835.5601	835.5601	0.0499		836.8081

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

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	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289

Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289
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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	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289
Total	0.0584	0.0428	0.4052	9.6000e-004	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		95.3390	95.3390	3.6000e-003		95.4289

4.0 Operational Detail - Mobile

Oceanside Construction Overlay - San Diego County, Summer

Oceanside Construction Overlay
S3 - San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	65.00	Dwelling Unit	4.31	65,000.00	186
Strip Mall	30.00	1000sqft	0.69	30,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - see assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	150
tblConstructionPhase	NumDays	18.00	90.00
tblConstructionPhase	PhaseEndDate	10/17/2017	12/28/2017
tblConstructionPhase	PhaseEndDate	6/6/2017	12/27/2017
tblConstructionPhase	PhaseEndDate	1/13/2017	1/27/2017
tblConstructionPhase	PhaseEndDate	1/17/2017	2/8/2017
tblConstructionPhase	PhaseEndDate	6/13/2017	3/6/2017
tblConstructionPhase	PhaseStartDate	6/14/2017	8/25/2017
tblConstructionPhase	PhaseStartDate	1/18/2017	2/9/2017
tblConstructionPhase	PhaseStartDate	1/14/2017	1/28/2017
tblConstructionPhase	PhaseStartDate	6/7/2017	2/9/2017
tblLandUse	LotAcreage	1.71	4.31
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	12.3234	49.2125	36.4199	0.0597	6.6756	2.9672	8.4539	3.4002	2.7646	5.0362	0.0000	5,995.9591	5,995.9591	1.4213	0.0000	6,031.4903
Maximum	12.3234	49.2125	36.4199	0.0597	6.6756	2.9672	8.4539	3.4002	2.7646	5.0362	0.0000	5,995.9591	5,995.9591	1.4213	0.0000	6,031.4903

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					
2017	12.3234	49.2125	36.4199	0.0597	2.9243	2.9672	4.7027	1.4723	2.7646	3.1084	0.0000	5,995.9591	5,995.9591	1.4213	0.0000	6,031.4903
Maximum	12.3234	49.2125	36.4199	0.0597	2.9243	2.9672	4.7027	1.4723	2.7646	3.1084	0.0000	5,995.9591	5,995.9591	1.4213	0.0000	6,031.4903

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.19	0.00	44.37	56.70	0.00	38.28	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	

4	Paving	Paving	2/9/2017	3/6/2017	5	18
5	Architectural Coating	Architectural Coating	8/25/2017	12/28/2017	5	90

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 131,625; Residential Outdoor: 43,875; Non-Residential Indoor: 45,000; Non-Residential Outdoor: 15,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
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Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	56.00	12.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	91.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9966	0.0000	0.9966	0.1509	0.0000	0.1509			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	0.9966	2.1935	3.1901	0.1509	2.0425	2.1934		3,924.2833	3,924.2833	1.0730		3,951.1070

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
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Category	lb/day										lb/day					
Hauling	0.0490	1.5764	0.3171	3.7000e-003	0.0795	8.8900e-003	0.0884	0.0218	8.5100e-003	0.0303		401.3544	401.3544	0.0356		402.2456
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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.1195	1.6284	0.8961	5.0900e-003	0.2027	9.8000e-003	0.2125	0.0545	9.3500e-003	0.0638		539.8213	539.8213	0.0408		540.8409

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					0.4261	0.0000	0.4261	0.0645	0.0000	0.0645			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	0.4261	2.1935	2.6195	0.0645	2.0425	2.1070	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.0490	1.5764	0.3171	3.7000e-003	0.0795	8.8900e-003	0.0884	0.0218	8.5100e-003	0.0303		401.3544	401.3544	0.0356		402.2456
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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.1195	1.6284	0.8961	5.0900e-003	0.2027	9.8000e-003	0.2125	0.0545	9.3500e-003	0.0638		539.8213	539.8213	0.0408		540.8409

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000				0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308			3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308			3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003			138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003			138.5953

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297		359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489		877.0884

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.0715	1.6940	0.4648	3.3600e-003	0.0812	0.0158	0.0970	0.0234	0.0151	0.0385		358.9235	358.9235	0.0297			359.6660
Worker	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192			517.4224
Total	0.3347	1.8881	2.6264	8.5600e-003	0.5413	0.0192	0.5604	0.1454	0.0182	0.1636		875.8664	875.8664	0.0489			877.0884

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141			2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141			2,348.4988

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366

Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366
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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	8.4898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	8.8221	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366
Total	0.0517	0.0381	0.4246	1.0200e-003	0.0904	6.7000e-004	0.0910	0.0240	6.1000e-004	0.0246		101.5424	101.5424	3.7700e-003		101.6366

4.0 Operational Detail - Mobile

**Construction
Scenario 4
CalEEMod**

Oceanside Construction - 5 acre full - San Diego County, Winter

**Oceanside Construction - 5 acre full
S4 - San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	325.00	Dwelling Unit	2.50	325,000.00	930
Strip Mall	150.00	1000sqft	2.50	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	18.00	180.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/8/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	3/6/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblLandUse	LotAcreage	8.55	2.50
tblLandUse	LotAcreage	3.44	2.50
tblProjectCharacteristics	OperationalYear	2018	2024

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					
2017	81.4082	56.7834	46.6746	0.0917	6.6756	3.0439	8.4539	3.4002	2.8376	5.0362	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792
Maximum	81.4082	56.7834	46.6746	0.0917	6.6756	3.0439	8.4539	3.4002	2.8376	5.0362	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792

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					
2017	81.4082	56.7834	46.6746	0.0917	3.1760	3.0439	5.8831	1.4723	2.8376	3.5997	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792
Maximum	81.4082	56.7834	46.6746	0.0917	3.1760	3.0439	5.8831	1.4723	2.8376	3.5997	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	52.42	0.00	30.41	56.70	0.00	28.52	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	
5	architectural coating	Architectural Coating	4/1/2017	12/8/2017	5	180	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 225,000; Non-Residential Outdoor: 75,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
architectural coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
architectural coating	1	56.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	282.00	59.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	455.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					4.9832	0.0000	4.9832	0.7546	0.0000	0.7546			0.0000				0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730			3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	4.9832	2.1935	7.1766	0.7546	2.0425	2.7971		3,924.2833	3,924.2833	1.0730			3,951.1070

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	0.2515	7.9766	1.7058	0.0182	0.3975	0.0453	0.4428	0.1090	0.0433	0.1523		1,974.7479	1,974.7479	0.1851			1,979.3756

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.3311	8.0350	2.2583	0.0195	0.5208	0.0462	0.5670	0.1416	0.0442	0.1858		2,104.7557	2,104.7557	0.1900		2,109.5059

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1303	0.0000	2.1303	0.3226	0.0000	0.3226			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	2.1303	2.1935	4.3238	0.3226	2.0425	2.3651	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.2515	7.9766	1.7058	0.0182	0.3975	0.0453	0.4428	0.1090	0.0433	0.1523		1,974.7479	1,974.7479	0.1851		1,979.3756
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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.3311	8.0350	2.2583	0.0195	0.5208	0.0462	0.5670	0.1416	0.0442	0.1858		2,104.7557	2,104.7557	0.1900		2,109.5059

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078

Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
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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	0.3659	8.3546	2.5212	0.0161	0.3994	0.0788	0.4783	0.1150	0.0754	0.1904		1,721.8063	1,721.8063	0.1554		1,725.6919
Worker	1.4964	1.0979	10.3865	0.0246	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,444.1455	2,444.1455	0.0922		2,446.4503
Total	1.8622	9.4526	12.9077	0.0407	2.7160	0.0959	2.8119	0.7294	0.0912	0.8206		4,165.9518	4,165.9518	0.2476		4,172.1423

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3659	8.3546	2.5212	0.0161	0.3994	0.0788	0.4783	0.1150	0.0754	0.1904		1,721.8063	1,721.8063	0.1554		1,725.6919
Worker	1.4964	1.0979	10.3865	0.0246	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,444.1455	2,444.1455	0.0922		2,446.4503
Total	1.8622	9.4526	12.9077	0.0407	2.7160	0.0959	2.8119	0.7294	0.0912	0.8206		4,165.9518	4,165.9518	0.2476		4,172.1423

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988

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	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
Worker	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003	130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003	130.1303

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	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.6 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.8016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	76.1339	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199

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	75.8016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	76.1339	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199

4.0 Operational Detail - Mobile

Oceanside Construction - 5 acre full - San Diego County, Summer

**Oceanside Construction - 5 acre full
S5 - San Diego County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	325.00	Dwelling Unit	2.50	325,000.00	930
Strip Mall	150.00	1000sqft	2.50	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	18.00	180.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/8/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	3/6/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblLandUse	LotAcreage	8.55	2.50
tblLandUse	LotAcreage	3.44	2.50
tblProjectCharacteristics	OperationalYear	2018	2024

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					
2017	81.1888	56.6308	46.9641	0.0938	6.6756	3.0427	8.4539	3.4002	2.8364	5.0362	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511
Maximum	81.1888	56.6308	46.9641	0.0938	6.6756	3.0427	8.4539	3.4002	2.8364	5.0362	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511

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					
2017	81.1888	56.6308	46.9641	0.0938	3.1760	3.0427	5.8819	1.4723	2.8364	3.5985	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511
Maximum	81.1888	56.6308	46.9641	0.0938	3.1760	3.0427	5.8819	1.4723	2.8364	3.5985	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	52.42	0.00	30.42	56.70	0.00	28.55	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	
5	architectural coating	Architectural Coating	4/1/2017	12/8/2017	5	180	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 225,000; Non-Residential Outdoor: 75,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
architectural coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
architectural coating	1	56.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	282.00	59.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	455.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	0.7546	0.0000	0.7546			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	4.9832	2.1935	7.1766	0.7546	2.0425	2.7971		3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.2450	7.8821	1.5855	0.0185	0.3975	0.0445	0.4420	0.1090	0.0425	0.1515		2,006.7722	2,006.7722	0.1782		2,011.2278

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.3155	7.9341	2.1645	0.0199	0.5208	0.0454	0.5661	0.1416	0.0434	0.1850		2,145.2390	2,145.2390	0.1834		2,149.8231

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					2.1303	0.0000	2.1303	0.3226	0.0000	0.3226			0.0000				0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.2833	3,924.2833	1.0730			3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	2.1303	2.1935	4.3238	0.3226	2.0425	2.3651	0.0000	3,924.2833	3,924.2833	1.0730			3,951.1070

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	0.2450	7.8821	1.5855	0.0185	0.3975	0.0445	0.4420	0.1090	0.0425	0.1515		2,006.7722	2,006.7722	0.1782			2,011.2278
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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003			138.5953
Total	0.3155	7.9341	2.1645	0.0199	0.5208	0.0454	0.5661	0.1416	0.0434	0.1850		2,145.2390	2,145.2390	0.1834			2,149.8231

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078

Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
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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	0.3515	8.3287	2.2855	0.0165	0.3994	0.0776	0.4770	0.1150	0.0743	0.1892		1,764.7073	1,764.7073	0.1460		1,768.3577
Worker	1.3253	0.9777	10.8852	0.0262	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,603.1767	2,603.1767	0.0966		2,605.5916
Total	1.6769	9.3064	13.1706	0.0427	2.7160	0.0947	2.8107	0.7294	0.0900	0.8195		4,367.8840	4,367.8840	0.2426		4,373.9492

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3515	8.3287	2.2855	0.0165	0.3994	0.0776	0.4770	0.1150	0.0743	0.1892		1,764.7073	1,764.7073	0.1460		1,768.3577
Worker	1.3253	0.9777	10.8852	0.0262	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,603.1767	2,603.1767	0.0966		2,605.5916
Total	1.6769	9.3064	13.1706	0.0427	2.7160	0.0947	2.8107	0.7294	0.0900	0.8195		4,367.8840	4,367.8840	0.2426		4,373.9492

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988

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
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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	0.0000
Worker	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335	138.4668	138.4668	5.1400e-003	138.5953	
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335	138.4668	138.4668	5.1400e-003	138.5953	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.6 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.8016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	76.1339	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224

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	75.8016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	76.1339	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224

4.0 Operational Detail - Mobile

**Construction
Scenario 5
CalEEMod**

Oceanside Construction - 5 acre full - San Diego County, Winter

**Oceanside Construction - 5 acre full
S5 - San Diego County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	325.00	Dwelling Unit	2.50	325,000.00	930
Strip Mall	150.00	1000sqft	2.50	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -
 Construction Off-road Equipment Mitigation -
 Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	18.00	180.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/8/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	3/6/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblLandUse	LotAcreage	8.55	2.50
tblLandUse	LotAcreage	3.44	2.50
tblProjectCharacteristics	OperationalYear	2018	2024

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2017	26.8311	56.7834	46.6746	0.0917	6.6756	3.0439	8.4539	3.4002	2.8376	5.0362	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792

Maximum	26.8311	56.7834	46.6746	0.0917	6.6756	3.0439	8.4539	3.4002	2.8376	5.0362	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792
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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					
2017	26.8311	56.7834	46.6746	0.0917	3.1760	3.0439	5.8831	1.4723	2.8376	3.5997	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792
Maximum	26.8311	56.7834	46.6746	0.0917	3.1760	3.0439	5.8831	1.4723	2.8376	3.5997	0.0000	9,277.5854	9,277.5854	1.6198	0.0000	9,318.0792

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	52.42	0.00	30.41	56.70	0.00	28.52	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	
5	architectural coating	Architectural Coating	4/1/2017	12/8/2017	5	180	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 225,000; Non-Residential Outdoor: 75,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
architectural coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
architectural coating	1	56.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	282.00	59.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Demolition	6	15.00	0.00	455.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	0.7546	0.0000	0.7546			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	4.9832	2.1935	7.1766	0.7546	2.0425	2.7971		3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.2515	7.9766	1.7058	0.0182	0.3975	0.0453	0.4428	0.1090	0.0433	0.1523		1,974.7479	1,974.7479	0.1851		1,979.3756
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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.3311	8.0350	2.2583	0.0195	0.5208	0.0462	0.5670	0.1416	0.0442	0.1858		2,104.7557	2,104.7557	0.1900		2,109.5059

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1303	0.0000	2.1303	0.3226	0.0000	0.3226			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	2.1303	2.1935	4.3238	0.3226	2.0425	2.3651	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.2515	7.9766	1.7058	0.0182	0.3975	0.0453	0.4428	0.1090	0.0433	0.1523		1,974.7479	1,974.7479	0.1851		1,979.3756
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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

Total	0.3311	8.0350	2.2583	0.0195	0.5208	0.0462	0.5670	0.1416	0.0442	0.1858		2,104.7557	2,104.7557	0.1900		2,109.5059
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3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000				0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308			3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308			3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.4 Building Construction - 2017

Unmitigated Construction On-Site

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

Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3659	8.3546	2.5212	0.0161	0.3994	0.0788	0.4783	0.1150	0.0754	0.1904		1,721.8063	1,721.8063	0.1554		1,725.6919
Worker	1.4964	1.0979	10.3865	0.0246	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,444.1455	2,444.1455	0.0922		2,446.4503
Total	1.8622	9.4526	12.9077	0.0407	2.7160	0.0959	2.8119	0.7294	0.0912	0.8206		4,165.9518	4,165.9518	0.2476		4,172.1423

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3659	8.3546	2.5212	0.0161	0.3994	0.0788	0.4783	0.1150	0.0754	0.1904		1,721.8063	1,721.8063	0.1554			1,725.6919
Worker	1.4964	1.0979	10.3865	0.0246	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,444.1455	2,444.1455	0.0922			2,446.4503
Total	1.8622	9.4526	12.9077	0.0407	2.7160	0.0959	2.8119	0.7294	0.0912	0.8206		4,165.9518	4,165.9518	0.2476			4,172.1423

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141			2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141			2,348.4988

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

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	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.6 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.2244					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	21.5568	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199

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	21.2244					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	21.5568	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199
Total	0.2972	0.2180	2.0626	4.8800e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		485.3622	485.3622	0.0183		485.8199

4.0 Operational Detail - Mobile

Oceanside Construction - 5 acre full - San Diego County, Summer

**Oceanside Construction - 5 acre full
S5 - San Diego County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	325.00	Dwelling Unit	2.50	325,000.00	930
Strip Mall	150.00	1000sqft	2.50	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See Assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Construction Off-road Equipment Mitigation -

Architectural Coating - see assumptions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	18.00	180.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/8/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	3/6/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/9/2017
tblLandUse	LotAcreage	8.55	2.50
tblLandUse	LotAcreage	3.44	2.50
tblProjectCharacteristics	OperationalYear	2018	2024

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2017	26.6117	56.6308	46.9641	0.0938	6.6756	3.0427	8.4539	3.4002	2.8364	5.0362	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511

Maximum	26.6117	56.6308	46.9641	0.0938	6.6756	3.0427	8.4539	3.4002	2.8364	5.0362	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511
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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					
2017	26.6117	56.6308	46.9641	0.0938	3.1760	3.0427	5.8819	1.4723	2.8364	3.5985	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511
Maximum	26.6117	56.6308	46.9641	0.0938	3.1760	3.0427	5.8819	1.4723	2.8364	3.5985	0.0000	9,487.9767	9,487.9767	1.6150	0.0000	9,528.3511

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	52.42	0.00	30.42	56.70	0.00	28.55	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	
5	architectural coating	Architectural Coating	4/1/2017	12/8/2017	5	180	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 225,000; Non-Residential Outdoor: 75,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
architectural coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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
architectural coating	1	56.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	282.00	59.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Demolition	6	15.00	0.00	455.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9832	0.0000	4.9832	0.7546	0.0000	0.7546			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	4.1031	42.7475	23.0122	0.0388	4.9832	2.1935	7.1766	0.7546	2.0425	2.7971		3,924.2833	3,924.2833	1.0730		3,951.1070

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	0.2450	7.8821	1.5855	0.0185	0.3975	0.0445	0.4420	0.1090	0.0425	0.1515		2,006.772 2	2,006.7722	0.1782		2,011.227 8
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	0.0705	0.0520	0.5790	1.3900e- 003	0.1232	9.1000e- 004	0.1241	0.0327	8.4000e- 004	0.0335		138.4668	138.4668	5.1400e- 003		138.5953
Total	0.3155	7.9341	2.1645	0.0199	0.5208	0.0454	0.5661	0.1416	0.0434	0.1850		2,145.239 0	2,145.2390	0.1834		2,149.823 1

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1303	0.0000	2.1303	0.3226	0.0000	0.3226			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425	0.0000	3,924.283 3	3,924.2833	1.0730		3,951.107 0
Total	4.1031	42.7475	23.0122	0.0388	2.1303	2.1935	4.3238	0.3226	2.0425	2.3651	0.0000	3,924.283 3	3,924.2833	1.0730		3,951.107 0

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	0.2450	7.8821	1.5855	0.0185	0.3975	0.0445	0.4420	0.1090	0.0425	0.1515		2,006.772 2	2,006.7722	0.1782		2,011.227 8
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	0.0705	0.0520	0.5790	1.3900e- 003	0.1232	9.1000e- 004	0.1241	0.0327	8.4000e- 004	0.0335		138.4668	138.4668	5.1400e- 003		138.5953

Total	0.3155	7.9341	2.1645	0.0199	0.5208	0.0454	0.5661	0.1416	0.0434	0.1850		2,145.2390	2,145.2390	0.1834		2,149.8231
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3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	6.5523	1.7774	8.3298	3.3675	1.6352	5.0027		3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	3.0705	33.8868	17.1042	0.0297	2.8011	1.7774	4.5786	1.4396	1.6352	3.0748	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.4 Building Construction - 2017

Unmitigated Construction On-Site

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

Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3515	8.3287	2.2855	0.0165	0.3994	0.0776	0.4770	0.1150	0.0743	0.1892		1,764.7073	1,764.7073	0.1460		1,768.3577
Worker	1.3253	0.9777	10.8852	0.0262	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,603.1767	2,603.1767	0.0966		2,605.5916
Total	1.6769	9.3064	13.1706	0.0427	2.7160	0.0947	2.8107	0.7294	0.0900	0.8195		4,367.8840	4,367.8840	0.2426		4,373.9492

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078

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	0.3515	8.3287	2.2855	0.0165	0.3994	0.0776	0.4770	0.1150	0.0743	0.1892		1,764.7073	1,764.7073	0.1460		1,768.3577
Worker	1.3253	0.9777	10.8852	0.0262	2.3166	0.0171	2.3336	0.6145	0.0158	0.6302		2,603.1767	2,603.1767	0.0966		2,605.5916
Total	1.6769	9.3064	13.1706	0.0427	2.7160	0.0947	2.8107	0.7294	0.0900	0.8195		4,367.8840	4,367.8840	0.2426		4,373.9492

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.6 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	21.2244					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	21.5568	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224

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	21.2244					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	21.5568	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224
Total	0.2632	0.1941	2.1616	5.2000e-003	0.4600	3.3900e-003	0.4634	0.1220	3.1300e-003	0.1252		516.9429	516.9429	0.0192		517.4224

4.0 Operational Detail - Mobile

Oceanside Construction - 5 acre full - San Diego County, Annual

**Oceanside Construction - 5 acre full
S5 - San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	325.00	Dwelling Unit	2.50	325,000.00	930
Strip Mall	150.00	1000sqft	2.50	150,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - see assumptions

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	18.00	180.00
tblLandUse	LotAcreage	8.55	2.50
tblLandUse	LotAcreage	3.44	2.50
tblProjectCharacteristics	OperationalYear	2018	2024

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					
2017	2.5913	5.1967	4.3752	9.4700e-003	0.4282	0.2724	0.7006	0.1157	0.2564	0.3721	0.0000	865.8008	865.8008	0.1181	0.0000	868.7531
Maximum	2.5913	5.1967	4.3752	9.4700e-003	0.4282	0.2724	0.7006	0.1157	0.2564	0.3721	0.0000	865.8008	865.8008	0.1181	0.0000	868.7531

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					
2017	2.5913	5.1967	4.3752	9.4700e-003	0.3847	0.2724	0.6571	0.1036	0.2564	0.3600	0.0000	865.8003	865.8003	0.1181	0.0000	868.7526
Maximum	2.5913	5.1967	4.3752	9.4700e-003	0.3847	0.2724	0.6571	0.1036	0.2564	0.3600	0.0000	865.8003	865.8003	0.1181	0.0000	868.7526

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	10.17	0.00	6.21	10.40	0.00	3.23	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	1.6496	1.6496
2	4-1-2017	6-30-2017	2.1077	2.1077
3	7-1-2017	9-30-2017	2.1308	2.1308
		Highest	2.1308	2.1308

2.2 Overall Operational

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	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/8/2017	5	8	
3	Building Construction	Building Construction	2/9/2017	12/27/2017	5	230	
4	Paving	Paving	2/9/2017	3/6/2017	5	18	
5	architectural coating	Architectural Coating	4/1/2017	12/8/2017	5	180	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 658,125; Residential Outdoor: 219,375; Non-Residential Indoor: 225,000; Non-Residential Outdoor: 75,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
architectural coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	455.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	282.00	59.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
architectural coating	1	56.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0498	0.0000	0.0498	7.5500e-003	0.0000	7.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	0.0410	0.4275	0.2301	3.9000e-004	0.0498	0.0219	0.0718	7.5500e-003	0.0204	0.0280	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438

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	2.4800e-003	0.0805	0.0164	1.8000e-004	3.8900e-003	4.5000e-004	4.3400e-003	1.0700e-003	4.3000e-004	1.5000e-003	0.0000	18.0831	18.0831	1.6400e-003	0.0000	18.1242
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	7.1000e-004	5.7000e-004	5.5100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1912	1.1912	4.0000e-005	0.0000	1.1923

Total	3.1900e-003	0.0811	0.0219	1.9000e-004	5.0900e-003	4.6000e-004	5.5500e-003	1.3900e-003	4.4000e-004	1.8300e-003	0.0000	19.2743	19.2743	1.6800e-003	0.0000	19.3165
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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					0.0213	0.0000	0.0213	3.2300e-003	0.0000	3.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	0.0410	0.4275	0.2301	3.9000e-004	0.0213	0.0219	0.0432	3.2300e-003	0.0204	0.0237	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438

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	2.4800e-003	0.0805	0.0164	1.8000e-004	3.8900e-003	4.5000e-004	4.3400e-003	1.0700e-003	4.3000e-004	1.5000e-003	0.0000	18.0831	18.0831	1.6400e-003	0.0000	18.1242
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	7.1000e-004	5.7000e-004	5.5100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1912	1.1912	4.0000e-005	0.0000	1.1923
Total	3.1900e-003	0.0811	0.0219	1.9000e-004	5.0900e-003	4.6000e-004	5.5500e-003	1.3900e-003	4.4000e-004	1.8300e-003	0.0000	19.2743	19.2743	1.6800e-003	0.0000	19.3165

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0123	0.1356	0.0684	1.2000e-004		7.1100e-003	7.1100e-003		6.5400e-003	6.5400e-003	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082
Total	0.0123	0.1356	0.0684	1.2000e-004	0.0262	7.1100e-003	0.0333	0.0135	6.5400e-003	0.0200	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082

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	2.8000e-004	2.3000e-004	2.2100e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4765	0.4765	2.0000e-005	0.0000	0.4769
Total	2.8000e-004	2.3000e-004	2.2100e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4765	0.4765	2.0000e-005	0.0000	0.4769

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					0.0112	0.0000	0.0112	5.7600e-003	0.0000	5.7600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0123	0.1356	0.0684	1.2000e-004		7.1100e-003	7.1100e-003		6.5400e-003	6.5400e-003	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082
Total	0.0123	0.1356	0.0684	1.2000e-004	0.0112	7.1100e-003	0.0183	5.7600e-003	6.5400e-003	0.0123	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082

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	2.8000e-004	2.3000e-004	2.2100e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4765	0.4765	2.0000e-005	0.0000	0.4769
Total	2.8000e-004	2.3000e-004	2.2100e-003	1.0000e-005	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4765	0.4765	2.0000e-005	0.0000	0.4769

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3582	3.0538	2.0910	3.1000e-003		0.2056	0.2056		0.1931	0.1931	0.0000	276.5668	276.5668	0.0681	0.0000	278.2702
Total	0.3582	3.0538	2.0910	3.1000e-003		0.2056	0.2056		0.1931	0.1931	0.0000	276.5668	276.5668	0.0681	0.0000	278.2702

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	0.0411	0.9715	0.2762	1.8800e-003	0.0450	8.9900e-003	0.0540	0.0130	8.6000e-003	0.0216	0.0000	182.2255	182.2255	0.0157	0.0000	182.6174
Worker	0.1532	0.1241	1.1918	2.8500e-003	0.2601	1.9600e-003	0.2620	0.0691	1.8100e-003	0.0709	0.0000	257.5300	257.5300	9.6600e-003	0.0000	257.7716
Total	0.1943	1.0957	1.4680	4.7300e-003	0.3051	0.0110	0.3160	0.0821	0.0104	0.0925	0.0000	439.7555	439.7555	0.0253	0.0000	440.3890

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	0.3582	3.0538	2.0910	3.1000e-003		0.2056	0.2056		0.1931	0.1931	0.0000	276.5664	276.5664	0.0681	0.0000	278.2699
Total	0.3582	3.0538	2.0910	3.1000e-003		0.2056	0.2056		0.1931	0.1931	0.0000	276.5664	276.5664	0.0681	0.0000	278.2699

Mitigated Construction Off-Site

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	6.4000e-004	5.2000e-004	4.9600e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0721	1.0721	4.0000e-005	0.0000	1.0731
Total	6.4000e-004	5.2000e-004	4.9600e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0721	1.0721	4.0000e-005	0.0000	1.0731

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	0.0175	0.1865	0.1353	2.1000e-004		0.0104	0.0104		9.6000e-003	9.6000e-003	0.0000	19.0289	19.0289	5.8300e-003	0.0000	19.1747
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0175	0.1865	0.1353	2.1000e-004		0.0104	0.0104		9.6000e-003	9.6000e-003	0.0000	19.0289	19.0289	5.8300e-003	0.0000	19.1747

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	6.4000e-004	5.2000e-004	4.9600e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0721	1.0721	4.0000e-005	0.0000	1.0731
Total	6.4000e-004	5.2000e-004	4.9600e-003	1.0000e-005	1.0800e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0721	1.0721	4.0000e-005	0.0000	1.0731

3.6 architectural coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.9102					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.1967	0.1681	2.7000e-004		0.0156	0.0156		0.0156	0.0156	0.0000	22.9793	22.9793	2.4300e-003	0.0000	23.0399
Total	1.9401	0.1967	0.1681	2.7000e-004		0.0156	0.0156		0.0156	0.0156	0.0000	22.9793	22.9793	2.4300e-003	0.0000	23.0399

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0193	0.1852	4.4000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	40.0232	40.0232	1.5000e-003	0.0000	40.0607
Total	0.0238	0.0193	0.1852	4.4000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	40.0232	40.0232	1.5000e-003	0.0000	40.0607

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.9102					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.1967	0.1681	2.7000e-004		0.0156	0.0156		0.0156	0.0156	0.0000	22.9793	22.9793	2.4300e-003	0.0000	23.0399
Total	1.9401	0.1967	0.1681	2.7000e-004		0.0156	0.0156		0.0156	0.0156	0.0000	22.9793	22.9793	2.4300e-003	0.0000	23.0399

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0238	0.0193	0.1852	4.4000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	40.0232	40.0232	1.5000e-003	0.0000	40.0607
Total	0.0238	0.0193	0.1852	4.4000e-004	0.0404	3.0000e-004	0.0407	0.0107	2.8000e-004	0.0110	0.0000	40.0232	40.0232	1.5000e-003	0.0000	40.0607

4.0 Operational Detail - Mobile

**Construction
Scenario 6
CalEEMod**

Oceanside - 2 acre - San Diego County, Winter

Oceanside - 2 acre
S6 - San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	130.00	Dwelling Unit	1.00	130,000.00	372
Strip Mall	60.00	1000sqft	1.00	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Architectural Coating - see assumptions

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	10.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/22/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	11/9/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/2/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/16/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	8/20/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblLandUse	LotAcreage	3.42	1.00
tblLandUse	LotAcreage	1.38	1.00
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	21.5242	43.5982	34.2592	0.0606	6.6345	2.5429	7.9336	3.3893	2.3965	4.5845	0.0000	5,959.6844	5,959.6844	1.1699	0.0000	5,988.9318
Maximum	21.5242	43.5982	34.2592	0.0606	6.6345	2.5429	7.9336	3.3893	2.3965	4.5845	0.0000	5,959.6844	5,959.6844	1.1699	0.0000	5,988.9318

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					
2017	21.5242	43.5982	34.2592	0.0606	2.8833	2.5429	4.1824	1.4614	2.3965	2.7222	0.0000	5,959.6844	5,959.6844	1.1699	0.0000	5,988.9318
Maximum	21.5242	43.5982	34.2592	0.0606	2.8833	2.5429	4.1824	1.4614	2.3965	2.7222	0.0000	5,959.6844	5,959.6844	1.1699	0.0000	5,988.9318

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.54	0.00	47.28	56.88	0.00	40.62	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	8/20/2017	12/22/2017	5	90	
2	Building Construction	Building Construction	2/3/2017	11/9/2017	5	200	
3	Grading	Grading	1/28/2017	2/2/2017	5	4	

4	Paving	Paving	2/3/2017	2/16/2017	5	10
5	Demolition	Demolition	1/1/2017	1/27/2017	5	20

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2

Acres of Paving: 0

Residential Indoor: 263,250; Residential Outdoor: 87,750; Non-Residential Indoor: 90,000; Non-Residential Outdoor: 30,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	113.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.9796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	17.3119	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.1221	0.0896	0.8471	2.0000e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		199.3452	199.3452	7.5200e-003		199.5332
Total	0.1221	0.0896	0.8471	2.0000e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		199.3452	199.3452	7.5200e-003		199.5332

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	16.9796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	17.3119	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1221	0.0896	0.8471	2.0000e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		199.3452	199.3452	7.5200e-003		199.5332
Total	0.1221	0.0896	0.8471	2.0000e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		199.3452	199.3452	7.5200e-003		199.5332

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922

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	0.1488	3.3985	1.0256	6.5600e-003	0.1625	0.0321	0.1945	0.0468	0.0307	0.0775		700.3958	700.3958	0.0632		701.9764
Worker	0.5996	0.4400	4.1620	9.8400e-003	0.9283	6.8400e-003	0.9351	0.2462	6.3100e-003	0.2525		979.3916	979.3916	0.0369		980.3152

Total	0.7484	3.8385	5.1875	0.0164	1.0907	0.0389	1.1296	0.2930	0.0370	0.3300		1,679.7874	1,679.7874	0.1002		1,682.2916
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922

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	0.1488	3.3985	1.0256	6.5600e-003	0.1625	0.0321	0.1945	0.0468	0.0307	0.0775		700.3958	700.3958	0.0632		701.9764
Worker	0.5996	0.4400	4.1620	9.8400e-003	0.9283	6.8400e-003	0.9351	0.2462	6.3100e-003	0.2525		979.3916	979.3916	0.0369		980.3152
Total	0.7484	3.8385	5.1875	0.0164	1.0907	0.0389	1.1296	0.2930	0.0370	0.3300		1,679.7874	1,679.7874	0.1002		1,682.2916

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947		2,112.1822	2,112.1822	0.6472		2,128.3614
Total	2.3212	26.1643	10.7753	0.0206	6.5523	1.2985	7.8509	3.3675	1.1947	4.5621		2,112.1822	2,112.1822	0.6472		2,128.3614

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	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536
Total	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536

Mitigated Construction On-Site

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

Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947	0.0000	2,112.182 2	2,112.1822	0.6472		2,128.361 4
Total	2.3212	26.1643	10.7753	0.0206	2.8011	1.2985	4.0997	1.4396	1.1947	2.6343	0.0000	2,112.182 2	2,112.1822	0.6472		2,128.361 4

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	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536
Total	0.0531	0.0389	0.3683	8.7000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		86.6718	86.6718	3.2700e-003		86.7536

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.268 2	1,802.2682	0.5420		1,815.817 7
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.268 2	1,802.2682	0.5420		1,815.817 7

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003			130.1303

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	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420			1,815.8177
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420			1,815.8177

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	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303
Total	0.0796	0.0584	0.5525	1.3100e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		130.0077	130.0077	4.9000e-003		130.1303

3.6 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502

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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299

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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.1006	3.1906	0.6823	7.2900e-003	0.1590	0.0181	0.1771	0.0436	0.0173	0.0609		789.8992	789.8992	0.0740		791.7502
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	0.0690	0.0506	0.4788	1.1300e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		112.6734	112.6734	4.2500e-003		112.7796
Total	0.1696	3.2413	1.1611	8.4200e-003	0.2658	0.0189	0.2847	0.0719	0.0181	0.0900		902.5725	902.5725	0.0783		904.5299

4.0 Operational Detail - Mobile

Oceanside - 2 acre - San Diego County, Summer

**Oceanside - 2 acre
S6 - San Diego County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	130.00	Dwelling Unit	1.00	130,000.00	372
Strip Mall	60.00	1000sqft	1.00	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - See assumptions
- Construction Phase - See Assumptions
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -
- Off-road Equipment -

Demolition -

Architectural Coating - see assumptions

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	10.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/22/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	11/9/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/2/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/16/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	8/20/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblLandUse	LotAcreage	3.42	1.00
tblLandUse	LotAcreage	1.38	1.00
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	21.4359	43.5330	34.3897	0.0614	6.6345	2.5424	7.9336	3.3893	2.3960	4.5845	0.0000	6,049.3201	6,049.3201	1.1681	0.0000	6,078.5216
Maximum	21.4359	43.5330	34.3897	0.0614	6.6345	2.5424	7.9336	3.3893	2.3960	4.5845	0.0000	6,049.3201	6,049.3201	1.1681	0.0000	6,078.5216

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					
2017	21.4359	43.5330	34.3897	0.0614	2.8833	2.5424	4.1824	1.4614	2.3960	2.7217	0.0000	6,049.3200	6,049.3200	1.1681	0.0000	6,078.5216
Maximum	21.4359	43.5330	34.3897	0.0614	2.8833	2.5424	4.1824	1.4614	2.3960	2.7217	0.0000	6,049.3200	6,049.3200	1.1681	0.0000	6,078.5216

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	56.54	0.00	47.28	56.88	0.00	40.63	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	8/20/2017	12/22/2017	5	90	
2	Building Construction	Building Construction	2/3/2017	11/9/2017	5	200	
3	Grading	Grading	1/28/2017	2/2/2017	5	4	

4	Paving	Paving	2/3/2017	2/16/2017	5	10
5	Demolition	Demolition	1/1/2017	1/27/2017	5	20

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2

Acres of Paving: 0

Residential Indoor: 263,250; Residential Outdoor: 87,750; Non-Residential Indoor: 90,000; Non-Residential Outdoor: 30,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	113.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.9796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	17.3119	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909

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	0.1081	0.0797	0.8878	2.1300e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		212.3158	212.3158	7.8800e-003		212.5128
Total	0.1081	0.0797	0.8878	2.1300e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		212.3158	212.3158	7.8800e-003		212.5128

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	16.9796					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	17.3119	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909

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	0.1081	0.0797	0.8878	2.1300e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		212.3158	212.3158	7.8800e-003		212.5128
Total	0.1081	0.0797	0.8878	2.1300e-003	0.1889	1.3900e-003	0.1903	0.0501	1.2800e-003	0.0514		212.3158	212.3158	7.8800e-003		212.5128

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068		2,347.6211	2,347.6211	0.5228		2,360.6922

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	0.1430	3.3879	0.9297	6.7200e-003	0.1625	0.0316	0.1941	0.0468	0.0302	0.0770		717.8471	717.8471	0.0594		719.3319
Worker	0.5311	0.3918	4.3618	0.0105	0.9283	6.8400e-003	0.9351	0.2462	6.3100e-003	0.2525		1,043.1169	1,043.1169	0.0387		1,044.0846

Total	0.6741	3.7797	5.2915	0.0172	1.0907	0.0384	1.1292	0.2930	0.0365	0.3295		1,760.9639	1,760.9639	0.0981		1,763.4165
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922
Total	3.3418	23.0287	16.3102	0.0250		1.4697	1.4697		1.4068	1.4068	0.0000	2,347.6211	2,347.6211	0.5228		2,360.6922

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	0.1430	3.3879	0.9297	6.7200e-003	0.1625	0.0316	0.1941	0.0468	0.0302	0.0770		717.8471	717.8471	0.0594		719.3319
Worker	0.5311	0.3918	4.3618	0.0105	0.9283	6.8400e-003	0.9351	0.2462	6.3100e-003	0.2525		1,043.1169	1,043.1169	0.0387		1,044.0846
Total	0.6741	3.7797	5.2915	0.0172	1.0907	0.0384	1.1292	0.2930	0.0365	0.3295		1,760.9639	1,760.9639	0.0981		1,763.4165

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947		2,112.1822	2,112.1822	0.6472		2,128.3614
Total	2.3212	26.1643	10.7753	0.0206	6.5523	1.2985	7.8509	3.3675	1.1947	4.5621		2,112.1822	2,112.1822	0.6472		2,128.3614

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	0.0470	0.0347	0.3860	9.3000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		92.3112	92.3112	3.4300e-003		92.3969
Total	0.0470	0.0347	0.3860	9.3000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		92.3112	92.3112	3.4300e-003		92.3969

Mitigated Construction On-Site

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

Fugitive Dust					2.8011	0.0000	2.8011	1.4396	0.0000	1.4396			0.0000			0.0000
Off-Road	2.3212	26.1643	10.7753	0.0206		1.2985	1.2985		1.1947	1.1947	0.0000	2,112.182 2	2,112.1822	0.6472		2,128.361 4
Total	2.3212	26.1643	10.7753	0.0206	2.8011	1.2985	4.0997	1.4396	1.1947	2.6343	0.0000	2,112.182 2	2,112.1822	0.6472		2,128.361 4

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	0.0470	0.0347	0.3860	9.3000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		92.3112	92.3112	3.4300e-003		92.3969
Total	0.0470	0.0347	0.3860	9.3000e-004	0.0822	6.0000e-004	0.0828	0.0218	5.6000e-004	0.0224		92.3112	92.3112	3.4300e-003		92.3969

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.268 2	1,802.2682	0.5420		1,815.817 7
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519		1,802.268 2	1,802.2682	0.5420		1,815.817 7

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003			138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003			138.5953

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420			1,815.8177
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Total	1.6589	16.6726	12.2090	0.0178		1.0334	1.0334		0.9519	0.9519	0.0000	1,802.2682	1,802.2682	0.5420			1,815.8177

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	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953
Total	0.0705	0.0520	0.5790	1.3900e-003	0.1232	9.1000e-004	0.1241	0.0327	8.4000e-004	0.0335		138.4668	138.4668	5.1400e-003		138.5953

3.6 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9933	0.0000	1.9933	0.3019	0.0000	0.3019			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404		2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	1.9933	1.6477	3.6409	0.3019	1.5404	1.8422		2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911

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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070

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					0.8521	0.0000	0.8521	0.1290	0.0000	0.1290			0.0000			0.0000
Off-Road	2.7625	26.7594	15.5573	0.0241		1.6477	1.6477		1.5404	1.5404	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347
Total	2.7625	26.7594	15.5573	0.0241	0.8521	1.6477	2.4998	0.1290	1.5404	1.6694	0.0000	2,421.4229	2,421.4229	0.6125		2,436.7347

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	0.0980	3.1528	0.6342	7.4000e-003	0.1590	0.0178	0.1768	0.0436	0.0170	0.0606		802.7089	802.7089	0.0713		804.4911
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	0.0611	0.0451	0.5018	1.2100e-003	0.1068	7.9000e-004	0.1076	0.0283	7.3000e-004	0.0291		120.0046	120.0046	4.4500e-003		120.1159
Total	0.1591	3.1979	1.1360	8.6100e-003	0.2658	0.0186	0.2844	0.0719	0.0178	0.0897		922.7135	922.7135	0.0757		924.6070

4.0 Operational Detail - Mobile

Oceanside - 2 acre - San Diego County, Annual

Oceanside - 2 acre
S6 - San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	130.00	Dwelling Unit	1.00	130,000.00	372
Strip Mall	60.00	1000sqft	1.00	60,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - See Assumptions

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Architectural Coating - see assumptions

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	10.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	10.00	90.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/22/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	11/9/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	1/27/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/2/2017
tblConstructionPhase	PhaseEndDate	12/30/2016	2/16/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	8/20/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	1/28/2017
tblConstructionPhase	PhaseStartDate	12/31/2016	2/3/2017
tblLandUse	LotAcreage	3.42	1.00
tblLandUse	LotAcreage	1.38	1.00
tblProjectCharacteristics	OperationalYear	2018	2019

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					

2017	1.2286	3.2284	2.5191	4.8500e-003	0.1513	0.1831	0.3344	0.0415	0.1749	0.2165	0.0000	429.8668	429.8668	0.0678	0.0000	431.5613
Maximum	1.2286	3.2284	2.5191	4.8500e-003	0.1513	0.1831	0.3344	0.0415	0.1749	0.2165	0.0000	429.8668	429.8668	0.0678	0.0000	431.5613

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					
2017	1.2286	3.2284	2.5191	4.8500e-003	0.1323	0.1831	0.3155	0.0360	0.1749	0.2109	0.0000	429.8665	429.8665	0.0678	0.0000	431.5610
Maximum	1.2286	3.2284	2.5191	4.8500e-003	0.1323	0.1831	0.3155	0.0360	0.1749	0.2109	0.0000	429.8665	429.8665	0.0678	0.0000	431.5610

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	12.51	0.00	5.66	13.43	0.00	2.58	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2017	3-31-2017	1.1014	1.1014
2	4-1-2017	6-30-2017	1.0018	1.0018
3	7-1-2017	9-30-2017	1.3081	1.3081
		Highest	1.3081	1.3081

2.2 Overall Operational

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/20/2017	12/22/2017	5	90	
2	Building Construction	Building Construction	2/3/2017	11/9/2017	5	200	
3	Grading	Grading	1/28/2017	2/2/2017	5	4	
4	Paving	Paving	2/3/2017	2/16/2017	5	10	
5	Demolition	Demolition	1/1/2017	1/27/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2

Acres of Paving: 0

Residential Indoor: 263,250; Residential Outdoor: 87,750; Non-Residential Indoor: 90,000; Non-Residential Outdoor: 30,000; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41

Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

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
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	113.00	24.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads
- Clean Paved Roads

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

Total	0.7790	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
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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	4.8900e-003	3.9600e-003	0.0380	9.0000e-005	8.3000e-003	6.0000e-005	8.3600e-003	2.2100e-003	6.0000e-005	2.2600e-003	0.0000	8.2190	8.2190	3.1000e-004	0.0000	8.2268
Total	4.8900e-003	3.9600e-003	0.0380	9.0000e-005	8.3000e-003	6.0000e-005	8.3600e-003	2.2100e-003	6.0000e-005	2.2600e-003	0.0000	8.2190	8.2190	3.1000e-004	0.0000	8.2268

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	0.7641					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200
Total	0.7790	0.0983	0.0841	1.3000e-004		7.8000e-003	7.8000e-003		7.8000e-003	7.8000e-003	0.0000	11.4896	11.4896	1.2100e-003	0.0000	11.5200

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	4.8900e-003	3.9600e-003	0.0380	9.0000e-005	8.3000e-003	6.0000e-005	8.3600e-003	2.2100e-003	6.0000e-005	2.2600e-003	0.0000	8.2190	8.2190	3.1000e-004	0.0000	8.2268
Total	4.8900e-003	3.9600e-003	0.0380	9.0000e-005	8.3000e-003	6.0000e-005	8.3600e-003	2.2100e-003	6.0000e-005	2.2600e-003	0.0000	8.2190	8.2190	3.1000e-004	0.0000	8.2268

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3342	2.3029	1.6310	2.5000e-003		0.1470	0.1470		0.1407	0.1407	0.0000	212.9726	212.9726	0.0474	0.0000	214.1584
Total	0.3342	2.3029	1.6310	2.5000e-003		0.1470	0.1470		0.1407	0.1407	0.0000	212.9726	212.9726	0.0474	0.0000	214.1584

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	0.0145	0.3437	0.0977	6.7000e-004	0.0159	3.1800e-003	0.0191	4.6000e-003	3.0400e-003	7.6400e-003	0.0000	64.4571	64.4571	5.5400e-003	0.0000	64.5957
Worker	0.0534	0.0433	0.4153	9.9000e-004	0.0906	6.8000e-004	0.0913	0.0241	6.3000e-004	0.0247	0.0000	89.7345	89.7345	3.3700e-003	0.0000	89.8187
Total	0.0679	0.3869	0.5130	1.6600e-003	0.1066	3.8600e-003	0.1104	0.0287	3.6700e-003	0.0324	0.0000	154.1916	154.1916	8.9100e-003	0.0000	154.4143

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	0.3342	2.3029	1.6310	2.5000e-003		0.1470	0.1470		0.1407	0.1407	0.0000	212.9724	212.9724	0.0474	0.0000	214.1581
Total	0.3342	2.3029	1.6310	2.5000e-003		0.1470	0.1470		0.1407	0.1407	0.0000	212.9724	212.9724	0.0474	0.0000	214.1581

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	0.0145	0.3437	0.0977	6.7000e-004	0.0159	3.1800e-003	0.0191	4.6000e-003	3.0400e-003	7.6400e-003	0.0000	64.4571	64.4571	5.5400e-003	0.0000	64.5957
Worker	0.0534	0.0433	0.4153	9.9000e-004	0.0906	6.8000e-004	0.0913	0.0241	6.3000e-004	0.0247	0.0000	89.7345	89.7345	3.3700e-003	0.0000	89.8187

Total	0.0679	0.3869	0.5130	1.6600e-003	0.1066	3.8600e-003	0.1104	0.0287	3.6700e-003	0.0324	0.0000	154.1916	154.1916	8.9100e-003	0.0000	154.4143
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3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0131	0.0000	0.0131	6.7300e-003	0.0000	6.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6400e-003	0.0523	0.0216	4.0000e-005		2.6000e-003	2.6000e-003		2.3900e-003	2.3900e-003	0.0000	3.8323	3.8323	1.1700e-003	0.0000	3.8616
Total	4.6400e-003	0.0523	0.0216	4.0000e-005	0.0131	2.6000e-003	0.0157	6.7300e-003	2.3900e-003	9.1200e-003	0.0000	3.8323	3.8323	1.1700e-003	0.0000	3.8616

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	9.0000e-005	8.0000e-005	7.4000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1588	0.1588	1.0000e-005	0.0000	0.1590
Total	9.0000e-005	8.0000e-005	7.4000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1588	0.1588	1.0000e-005	0.0000	0.1590

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					5.6000e-003	0.0000	5.6000e-003	2.8800e-003	0.0000	2.8800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6400e-003	0.0523	0.0216	4.0000e-005		2.6000e-003	2.6000e-003		2.3900e-003	2.3900e-003	0.0000	3.8323	3.8323	1.1700e-003	0.0000	3.8616
Total	4.6400e-003	0.0523	0.0216	4.0000e-005	5.6000e-003	2.6000e-003	8.2000e-003	2.8800e-003	2.3900e-003	5.2700e-003	0.0000	3.8323	3.8323	1.1700e-003	0.0000	3.8616

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	9.0000e-005	8.0000e-005	7.4000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1588	0.1588	1.0000e-005	0.0000	0.1590
Total	9.0000e-005	8.0000e-005	7.4000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1588	0.1588	1.0000e-005	0.0000	0.1590

3.5 Paving - 2017

Unmitigated Construction On-Site

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

Off-Road	8.2900e-003	0.0834	0.0611	9.0000e-005		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	8.1750	8.1750	2.4600e-003	0.0000	8.2364
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.2900e-003	0.0834	0.0611	9.0000e-005		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	8.1750	8.1750	2.4600e-003	0.0000	8.2364

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	3.5000e-004	2.9000e-004	2.7600e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5956	0.5956	2.0000e-005	0.0000	0.5961
Total	3.5000e-004	2.9000e-004	2.7600e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5956	0.5956	2.0000e-005	0.0000	0.5961

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	8.2900e-003	0.0834	0.0611	9.0000e-005		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	8.1749	8.1749	2.4600e-003	0.0000	8.2364
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	8.2900e-003	0.0834	0.0611	9.0000e-005		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	8.1749	8.1749	2.4600e-003	0.0000	8.2364

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	3.5000e-004	2.9000e-004	2.7600e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5956	0.5956	2.0000e-005	0.0000	0.5961
Total	3.5000e-004	2.9000e-004	2.7600e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5956	0.5956	2.0000e-005	0.0000	0.5961

3.6 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0199	0.0000	0.0199	3.0200e-003	0.0000	3.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0276	0.2676	0.1556	2.4000e-004		0.0165	0.0165		0.0154	0.0154	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057
Total	0.0276	0.2676	0.1556	2.4000e-004	0.0199	0.0165	0.0364	3.0200e-003	0.0154	0.0184	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057

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	9.9000e-004	0.0322	6.5500e-003	7.0000e-005	1.5600e-003	1.8000e-004	1.7400e-003	4.3000e-004	1.7000e-004	6.0000e-004	0.0000	7.2333	7.2333	6.6000e-004	0.0000	7.2497
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	6.1000e-004	5.0000e-004	4.7800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	1.0323	1.0323	4.0000e-005	0.0000	1.0333
Total	1.6000e-003	0.0327	0.0113	8.0000e-005	2.6000e-003	1.9000e-004	2.7900e-003	7.1000e-004	1.8000e-004	8.8000e-004	0.0000	8.2656	8.2656	7.0000e-004	0.0000	8.2830

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					8.5200e-003	0.0000	8.5200e-003	1.2900e-003	0.0000	1.2900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0276	0.2676	0.1556	2.4000e-004		0.0165	0.0165		0.0154	0.0154	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057
Total	0.0276	0.2676	0.1556	2.4000e-004	8.5200e-003	0.0165	0.0250	1.2900e-003	0.0154	0.0167	0.0000	21.9668	21.9668	5.5600e-003	0.0000	22.1057

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	9.9000e-004	0.0322	6.5500e-003	7.0000e-005	1.5600e-003	1.8000e-004	1.7400e-003	4.3000e-004	1.7000e-004	6.0000e-004	0.0000	7.2333	7.2333	6.6000e-004	0.0000	7.2497

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	6.1000e-004	5.0000e-004	4.7800e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	1.0323	1.0323	4.0000e-005	0.0000	1.0333
Total	1.6000e-003	0.0327	0.0113	8.0000e-005	2.6000e-003	1.9000e-004	2.7900e-003	7.1000e-004	1.8000e-004	8.8000e-004	0.0000	8.2656	8.2656	7.0000e-004	0.0000	8.2830

4.0 Operational Detail - Mobile

A-3 Overlay Operational Scenarios - Emissions Calculations and Model Output

City of Oceanside Overlay Project

Air Quality and Greenhouse Gas Assessment

Greenhouse Gas Emissions Analysis: Example Development Scenarios

CalEEMod Run Scenario	Example Land Use Type	Land Use Units	GHG Emissions MTCO2e per Year	Scaled Land Use Units	Scaled GHG Emissions MTCO2e per Year
Example Single-Use Project with NET INCREASE over Existing Conditions for the Following Land Uses:					
Residential 1	Apartment Mid-Rise	10 DU	121	66 DU	799
Commercial 1	Fast Food Restaurant w/Drive Through	1,000 sf	273	2,930 sf	800
Commercial 2	High-Turnover Sit Down Restaurant	1,000 sf	99	8,080 sf	800
Commercial 3	Strip Mall Retail	1,000 sf	34	23,500 sf	799
Commercial 4	General Office Building	1,000 sf	16	50,000 sf	800
Example Mixed-Use Project with NET INCREASE over Existing Conditions for the Following Land Uses:					
Residential 1	Apartment Mid-Rise			25 DU	303
Commercial 1	Fast Food Restaurant w/Drive Through			1,400 sf	382
Commercial 3	Strip Mall Retail			3,350 sf	114
				Total:	799
Residential 1	Apartment Mid-Rise			30 DU	363
Commercial 2	High-Turnover Sit Down Restaurant			2,800 sf	277
Commercial 4	General Office Building			10,000 sf	160
				Total:	800

Note:

Amortized construction-related GHG emissions are conservatively assumed to contribute 100 MTCO2e per year or less, when amortized over a project lifetime of 30 years, which is consistent for typical land use development projects where amortized construction GHG emissions contribute less than 5% of annual GHG emissions.

Oceanside Operations Overlay - San Diego County, Annual

**Oceanside Operations Overlay - Residential
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	10.00	Dwelling Unit	0.26	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Residential Scenario Model Run for +10 net increase in DU

Energy Use - Title 24 (2016) Compliance. Residential reduction of 28%, Nonresidential reduction of 5% compared to prior 2013 standards. Source: CEC, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.

Solid Waste - Solid Waste default assumptions of 6% no capture, 94% flare, 0% energy recovery.

Mobile Land Use Mitigation -

Water Mitigation - Water Efficient indoor fixtures and outdoor landscaping irrigation required per Title 24 and CALGreen requirements.

Waste Mitigation - 62% waste diversion. Source: County of San Diego, Strategic Plan to Reduce Waste, October 2016.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	741.44	533.84
tblEnergyUse	T24E	246.93	177.79
tblEnergyUse	T24NG	4,687.93	3,375.36

2.0 Emissions Summary

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	0.6845	0.0131	0.8493	1.4100e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664
Energy	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	17.0672	17.0672	6.0000e-004	1.8000e-004	17.1366
Mobile	0.0256	0.1119	0.3089	8.9000e-004	0.0700	1.0700e-003	0.0710	0.0187	1.0000e-003	0.0198	0.0000	81.8353	81.8353	4.7900e-003	0.0000	81.9550
Waste						0.0000	0.0000		0.0000	0.0000	0.9338	0.0000	0.9338	0.0552	0.0000	2.3134
Water						0.0000	0.0000		0.0000	0.0000	0.2067	4.2639	4.4706	0.0214	5.4000e-004	5.1657
Total	0.7105	0.1285	1.1597	2.3200e-003	0.0700	0.1104	0.1803	0.0187	0.1103	0.1290	11.4700	107.6198	119.0899	0.0916	1.5300e-003	121.8371

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	0.6845	0.0131	0.8493	1.4100e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664
Energy	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	17.0672	17.0672	6.0000e-004	1.8000e-004	17.1366
Mobile	0.0258	0.1128	0.3119	9.0000e-004	0.0709	1.0800e-003	0.0720	0.0190	1.0200e-003	0.0200	0.0000	82.8351	82.8351	4.8400e-003	0.0000	82.9560
Waste						0.0000	0.0000		0.0000	0.0000	0.3548	0.0000	0.3548	0.0210	0.0000	0.8791
Water						0.0000	0.0000		0.0000	0.0000	0.1654	3.6185	3.7838	0.0171	4.3000e-004	4.3406
Total	0.7107	0.1294	1.1627	2.3300e-003	0.0709	0.1104	0.1812	0.0190	0.1103	0.1293	10.8498	107.9741	118.8239	0.0532	1.4200e-003	120.5787

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-0.02	-0.75	-0.26	-0.43	-1.29	-0.01	-0.50	-1.33	-0.02	-0.19	5.41	-0.33	0.22	41.94	7.19	1.03

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive 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	0.0258	0.1128	0.3119	9.0000e-004	0.0709	1.0800e-003	0.0720	0.0190	1.0200e-003	0.0200	0.0000	82.8351	82.8351	4.8400e-003	0.0000	82.9560
Unmitigated	0.0256	0.1119	0.3089	8.9000e-004	0.0700	1.0700e-003	0.0710	0.0187	1.0000e-003	0.0198	0.0000	81.8353	81.8353	4.7900e-003	0.0000	81.9550

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	66.50	63.90	58.60	185,595	187,988
Total	66.50	63.90	58.60	185,595	187,988

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.0354	13.0354	5.2000e-004	1.1000e-004	13.0809
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	13.0354	13.0354	5.2000e-004	1.1000e-004	13.0809
NaturalGas Mitigated	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558
NaturalGas Unmitigated	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558

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					
Apartments Mid Rise	75553.6	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558
Total		4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558

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					
Apartments Mid Rise	75553.6	4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558
Total		4.1000e-004	3.4800e-003	1.4800e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0318	4.0318	8.0000e-005	7.0000e-005	4.0558

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	39886.9	13.0354	5.2000e-004	1.1000e-004	13.0809
Total		13.0354	5.2000e-004	1.1000e-004	13.0809

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	39886.9	13.0354	5.2000e-004	1.1000e-004	13.0809
Total		13.0354	5.2000e-004	1.1000e-004	13.0809

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	0.6845	0.0131	0.8493	1.4100e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664
Unmitigated	0.6845	0.0131	0.8493	1.4100e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664

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	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0391					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6275	0.0123	0.7745	1.4000e-003		0.1086	0.1086		0.1086	0.1086	10.3296	4.3321	14.6617	9.5300e-003	8.1000e-004	15.1421
Landscaping	2.3100e-003	8.7000e-004	0.0748	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.1213	0.1213	1.2000e-004	0.0000	0.1243
Total	0.6845	0.0131	0.8493	1.4000e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664

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	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0391					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6275	0.0123	0.7745	1.4000e-003		0.1086	0.1086		0.1086	0.1086	10.3296	4.3321	14.6617	9.5300e-003	8.1000e-004	15.1421
Landscaping	2.3100e-003	8.7000e-004	0.0748	0.0000		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	0.1213	0.1213	1.2000e-004	0.0000	0.1243
Total	0.6845	0.0131	0.8493	1.4000e-003		0.1090	0.1090		0.1090	0.1090	10.3296	4.4534	14.7829	9.6500e-003	8.1000e-004	15.2664

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	3.7838	0.0171	4.3000e-004	4.3406
Unmitigated	4.4706	0.0214	5.4000e-004	5.1657

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0.65154 / 0.410754	4.4706	0.0214	5.4000e-004	5.1657
Total		4.4706	0.0214	5.4000e-004	5.1657

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	0.521232 / 0.385698	3.7838	0.0171	4.3000e-004	4.3406
Total		3.7838	0.0171	4.3000e-004	4.3406

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.3548	0.0210	0.0000	0.8791
Unmitigated	0.9338	0.0552	0.0000	2.3134

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	4.6	0.9338	0.0552	0.0000	2.3134
Total		0.9338	0.0552	0.0000	2.3134

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1.748	0.3548	0.0210	0.0000	0.8791
Total		0.3548	0.0210	0.0000	0.8791

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Oceanside Operations Overlay - Commercial 1 - San Diego County, Annual

Oceanside Operations Overlay - Commercial 1
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Commercial 1 Scenario Model Run for +1,000 sf net increase for Fast Food Restaurant

Energy Use - Title 24 (2016) Compliance. Residential reduction of 28%, Nonresidential reduction of 5% compared to prior 2013 standards. Source: CEC, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.

Mobile Land Use Mitigation -

Water Mitigation - Water Efficient indoor fixtures and outdoor landscaping irrigation required per Title 24 and CALGreen requirements.

Waste Mitigation - 62% waste diversion. Source: County of San Diego, Strategic Plan to Reduce Waste, October 2016.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	6.97	6.62
tblEnergyUse	T24E	8.63	8.20
tblEnergyUse	T24NG	36.10	34.30

2.0 Emissions Summary

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	21.8045	21.8045	6.8000e-004	2.7000e-004	21.9032
Mobile	0.1492	0.5108	1.2350	2.6600e-003	0.1885	3.3500e-003	0.1918	0.0505	3.1600e-003	0.0536	0.0000	244.2428	244.2428	0.0182	0.0000	244.6980
Waste						0.0000	0.0000		0.0000	0.0000	2.3385	0.0000	2.3385	0.1382	0.0000	5.7934
Water						0.0000	0.0000		0.0000	0.0000	0.0963	1.3620	1.4583	9.9500e-003	2.4000e-004	1.7799
Total	0.1552	0.5193	1.2422	2.7100e-003	0.1885	3.9900e-003	0.1925	0.0505	3.8000e-003	0.0543	2.4348	267.4094	269.8441	0.1670	5.1000e-004	274.1746

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	21.8045	21.8045	6.8000e-004	2.7000e-004	21.9032
Mobile	0.1496	0.5134	1.2432	2.6900e-003	0.1909	3.3900e-003	0.1943	0.0511	3.1900e-003	0.0543	0.0000	246.9357	246.9357	0.0183	0.0000	247.3942
Waste						0.0000	0.0000		0.0000	0.0000	0.8886	0.0000	0.8886	0.0525	0.0000	2.2015
Water						0.0000	0.0000		0.0000	0.0000	0.0770	1.0994	1.1764	7.9600e-003	2.0000e-004	1.4337
Total	0.1556	0.5219	1.2504	2.7400e-003	0.1909	4.0300e-003	0.1949	0.0511	3.8300e-003	0.0550	0.9657	269.8396	270.8053	0.0795	4.7000e-004	272.9327

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-0.25	-0.49	-0.66	-1.11	-1.29	-1.00	-1.28	-1.29	-0.79	-1.27	60.34	-0.91	-0.36	52.41	7.84	0.45

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive 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	0.1496	0.5134	1.2432	2.6900e-003	0.1909	3.3900e-003	0.1943	0.0511	3.1900e-003	0.0543	0.0000	246.9357	246.9357	0.0183	0.0000	247.3942
Unmitigated	0.1492	0.5108	1.2350	2.6600e-003	0.1885	3.3500e-003	0.1918	0.0505	3.1600e-003	0.0536	0.0000	244.2428	244.2428	0.0182	0.0000	244.6980

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	496.12	722.03	542.72	499,911	506,357
Total	496.12	722.03	542.72	499,911	506,357

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive Thru	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5854	12.5854	5.1000e-004	1.0000e-004	12.6293
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5854	12.5854	5.1000e-004	1.0000e-004	12.6293
NaturalGas Mitigated	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
NaturalGas Unmitigated	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

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					
Fast Food Restaurant with Drive Thru	172760	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
Total		9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

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					
Fast Food Restaurant with Drive Thru	172760	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
Total		9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	38510	12.5854	5.1000e-004	1.0000e-004	12.6293
Total		12.5854	5.1000e-004	1.0000e-004	12.6293

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Fast Food Restaurant with Drive Thru	38510	12.5854	5.1000e-004	1.0000e-004	12.6293
Total		12.5854	5.1000e-004	1.0000e-004	12.6293

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	1.1764	7.9600e-003	2.0000e-004	1.4337
Unmitigated	1.4583	9.9500e-003	2.4000e-004	1.7799

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.303534 / 0.0193745	1.4583	9.9500e-003	2.4000e-004	1.7799
Total		1.4583	9.9500e-003	2.4000e-004	1.7799

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Fast Food Restaurant with Drive Thru	0.242827 / 0.0181926	1.1764	7.9600e-003	2.0000e-004	1.4337
Total		1.1764	7.9600e-003	2.0000e-004	1.4337

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.8886	0.0525	0.0000	2.2015
Unmitigated	2.3385	0.1382	0.0000	5.7934

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	11.52	2.3385	0.1382	0.0000	5.7934
Total		2.3385	0.1382	0.0000	5.7934

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive Thru	4.3776	0.8886	0.0525	0.0000	2.2015
Total		0.8886	0.0525	0.0000	2.2015

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Oceanside Operations Overlay - Commercial 2 - San Diego County, Annual

**Oceanside Operations Overlay - Commercial 2
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Commercial 2 Scenario Model Run for +1,000 sf net increase for High-Turnover Sit Down Restaurant

Energy Use - Title 24 (2016) Compliance. Residential reduction of 28%, Nonresidential reduction of 5% compared to prior 2013 standards. Source: CEC, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.

Mobile Land Use Mitigation -

Water Mitigation - Water Efficient indoor fixtures and outdoor landscaping irrigation required per Title 24 and CALGreen requirements.

Waste Mitigation - 62% waste diversion. Source: County of San Diego, Strategic Plan to Reduce Waste, October 2016.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	6.97	6.62
tblEnergyUse	T24E	8.63	8.20
tblEnergyUse	T24NG	36.10	34.30

2.0 Emissions Summary

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	21.8045	21.8045	6.8000e-004	2.7000e-004	21.9032
Mobile	0.0387	0.1382	0.3434	7.9000e-004	0.0579	9.9000e-004	0.0589	0.0155	9.3000e-004	0.0164	0.0000	72.8698	72.8698	5.1200e-003	0.0000	72.9978
Waste						0.0000	0.0000		0.0000	0.0000	2.4156	0.0000	2.4156	0.1428	0.0000	5.9845
Water						0.0000	0.0000		0.0000	0.0000	0.0963	1.3620	1.4583	9.9500e-003	2.4000e-004	1.7799
Total	0.0447	0.1467	0.3505	8.4000e-004	0.0579	1.6300e-003	0.0595	0.0155	1.5700e-003	0.0171	2.5119	96.0364	98.5483	0.1585	5.1000e-004	102.6655

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	21.8045	21.8045	6.8000e-004	2.7000e-004	21.9032
Mobile	0.0388	0.1390	0.3459	8.0000e-004	0.0586	1.0000e-003	0.0596	0.0157	9.4000e-004	0.0166	0.0000	73.6966	73.6966	5.1600e-003	0.0000	73.8256
Waste						0.0000	0.0000		0.0000	0.0000	0.9179	0.0000	0.9179	0.0543	0.0000	2.2741
Water						0.0000	0.0000		0.0000	0.0000	0.0770	1.0994	1.1764	7.9600e-003	2.0000e-004	1.4337
Total	0.0448	0.1475	0.3530	8.5000e-004	0.0586	1.6400e-003	0.0603	0.0157	1.5800e-003	0.0173	0.9950	96.6005	97.5955	0.0681	4.7000e-004	99.4367

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-0.27	-0.54	-0.72	-1.19	-1.30	-0.61	-1.28	-1.29	-0.64	-1.23	60.39	-0.59	0.97	57.07	7.84	3.14

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive 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	0.0388	0.1390	0.3459	8.0000e-004	0.0586	1.0000e-003	0.0596	0.0157	9.4000e-004	0.0166	0.0000	73.6966	73.6966	5.1600e-003	0.0000	73.8256
Unmitigated	0.0387	0.1382	0.3434	7.9000e-004	0.0579	9.9000e-004	0.0589	0.0155	9.3000e-004	0.0164	0.0000	72.8698	72.8698	5.1200e-003	0.0000	72.9978

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	127.15	158.37	131.84	153,480	155,459
Total	127.15	158.37	131.84	153,480	155,459

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High Turnover (Sit Down Restaurant)	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5854	12.5854	5.1000e-004	1.0000e-004	12.6293
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	12.5854	12.5854	5.1000e-004	1.0000e-004	12.6293
NaturalGas Mitigated	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
NaturalGas Unmitigated	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

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					
High Turnover (Sit Down Restaurant)	172760	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
Total		9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

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					
High Turnover (Sit Down Restaurant)	172760	9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739
Total		9.3000e-004	8.4700e-003	7.1100e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	9.2191	9.2191	1.8000e-004	1.7000e-004	9.2739

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	38510	12.5854	5.1000e-004	1.0000e-004	12.6293
Total		12.5854	5.1000e-004	1.0000e-004	12.6293

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	38510	12.5854	5.1000e-004	1.0000e-004	12.6293
Total		12.5854	5.1000e-004	1.0000e-004	12.6293

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	1.1764	7.9600e-003	2.0000e-004	1.4337
Unmitigated	1.4583	9.9500e-003	2.4000e-004	1.7799

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.303534 / 0.0193745	1.4583	9.9500e-003	2.4000e-004	1.7799
Total		1.4583	9.9500e-003	2.4000e-004	1.7799

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.242827 / 0.0181926	1.1764	7.9600e-003	2.0000e-004	1.4337
Total		1.1764	7.9600e-003	2.0000e-004	1.4337

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9179	0.0543	0.0000	2.2741
Unmitigated	2.4156	0.1428	0.0000	5.9845

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	11.9	2.4156	0.1428	0.0000	5.9845
Total		2.4156	0.1428	0.0000	5.9845

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	4.522	0.9179	0.0543	0.0000	2.2741
Total		0.9179	0.0543	0.0000	2.2741

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Oceanside Operations Overlay - Commercial 3 - San Diego County, Annual

**Oceanside Operations Overlay - Commercial 3
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Commercial 3 Scenario Model Run for +1,000 sf net increase for Strip Mall Retail.

Energy Use - Title 24 (2016) Compliance. Residential reduction of 28%, Nonresidential reduction of 5% compared to prior 2013 standards. Source: CEC, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.

Mobile Land Use Mitigation -

Water Mitigation - Water Efficient indoor fixtures and outdoor landscaping irrigation required per Title 24 and CALGreen requirements.

Waste Mitigation - 62% waste diversion. Source: County of San Diego, Strategic Plan to Reduce Waste, October 2016.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	6.39	6.07
tblEnergyUse	T24E	3.34	3.17
tblEnergyUse	T24NG	1.15	1.09

2.0 Emissions Summary

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1688	4.1688	1.7000e-004	4.0000e-005	4.1836
Mobile	0.0128	0.0486	0.1249	3.1000e-004	0.0236	3.8000e-004	0.0240	6.3100e-003	3.6000e-004	6.6700e-003	0.0000	28.7937	28.7937	1.8900e-003	0.0000	28.8409
Waste						0.0000	0.0000		0.0000	0.0000	0.2131	0.0000	0.2131	0.0126	0.0000	0.5281
Water						0.0000	0.0000		0.0000	0.0000	0.0235	0.4800	0.5035	2.4300e-003	6.0000e-005	0.5825
Total	0.0179	0.0487	0.1250	3.1000e-004	0.0236	3.9000e-004	0.0240	6.3100e-003	3.7000e-004	6.6800e-003	0.2366	33.4426	33.6792	0.0171	1.0000e-004	34.1351

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.1688	4.1688	1.7000e-004	4.0000e-005	4.1836
Mobile	0.0128	0.0489	0.1260	3.2000e-004	0.0239	3.9000e-004	0.0243	6.3900e-003	3.7000e-004	6.7600e-003	0.0000	29.1304	29.1304	1.9000e-003	0.0000	29.1780
Waste						0.0000	0.0000		0.0000	0.0000	0.2131	0.0000	0.2131	0.0126	0.0000	0.5281
Water						0.0000	0.0000		0.0000	0.0000	0.0188	0.4070	0.4258	1.9500e-003	5.0000e-005	0.4890
Total	0.0179	0.0490	0.1261	3.2000e-004	0.0239	4.0000e-004	0.0243	6.3900e-003	3.8000e-004	6.7700e-003	0.2319	33.7061	33.9381	0.0166	9.0000e-005	34.3787

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-0.28	-0.66	-0.82	-3.23	-1.32	-2.56	-1.25	-1.27	-2.70	-1.35	1.99	-0.79	-0.77	2.75	10.00	-0.71

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive 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	0.0128	0.0489	0.1260	3.2000e-004	0.0239	3.9000e-004	0.0243	6.3900e-003	3.7000e-004	6.7600e-003	0.0000	29.1304	29.1304	1.9000e-003	0.0000	29.1780
Unmitigated	0.0128	0.0486	0.1249	3.1000e-004	0.0236	3.8000e-004	0.0240	6.3100e-003	3.6000e-004	6.6700e-003	0.0000	28.7937	28.7937	1.8900e-003	0.0000	28.8409

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	44.32	42.04	20.43	62,497	63,303
Total	44.32	42.04	20.43	62,497	63,303

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0524	4.0524	1.6000e-004	3.0000e-005	4.0666
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0524	4.0524	1.6000e-004	3.0000e-005	4.0666
NaturalGas Mitigated	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170
NaturalGas Unmitigated	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170

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					
Strip Mall	2180	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170
Total		1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170

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					
Strip Mall	2180	1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170
Total		1.0000e-005	1.1000e-004	9.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1163	0.1163	0.0000	0.0000	0.1170

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	12400	4.0524	1.6000e-004	3.0000e-005	4.0666
Total		4.0524	1.6000e-004	3.0000e-005	4.0666

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	12400	4.0524	1.6000e-004	3.0000e-005	4.0666
Total		4.0524	1.6000e-004	3.0000e-005	4.0666

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.4258	1.9500e-003	5.0000e-005	0.4890
Unmitigated	0.5035	2.4300e-003	6.0000e-005	0.5825

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.0740725 / 0.0450000	0.5035	2.4300e-003	6.0000e-005	0.5825
Total		0.5035	2.4300e-003	6.0000e-005	0.5825

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.059258 / 0.0426299	0.4258	1.9500e-003	5.0000e-005	0.4890
Total		0.4258	1.9500e-003	5.0000e-005	0.4890

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2131	0.0126	0.0000	0.5281
Unmitigated	0.2131	0.0126	0.0000	0.5281

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	1.05	0.2131	0.0126	0.0000	0.5281
Total		0.2131	0.0126	0.0000	0.5281

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	1.05	0.2131	0.0126	0.0000	0.5281
Total		0.2131	0.0126	0.0000	0.5281

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Oceanside Operations Overlay - Commercial 4 - San Diego County, Annual

**Oceanside Operations Overlay - Commercial 4
San Diego County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Commercial 4 Scenario Model Run for +1,000 sf net increase for General Office Building.

Energy Use - Title 24 (2016) Compliance. Residential reduction of 28%, Nonresidential reduction of 5% compared to prior 2013 standards. Source: CEC, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.

Mobile Land Use Mitigation -

Water Mitigation - Water Efficient indoor fixtures and outdoor landscaping irrigation required per Title 24 and CALGreen requirements.

Waste Mitigation - 62% waste diversion. Source: County of San Diego, Strategic Plan to Reduce Waste, October 2016.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	3.91	3.71
tblEnergyUse	T24E	4.88	4.64
tblEnergyUse	T24NG	16.07	15.27

2.0 Emissions Summary

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	5.3921	5.3921	2.0000e-004	6.0000e-005	5.4134
Mobile	3.0700e-003	0.0129	0.0349	1.0000e-004	7.5500e-003	1.2000e-004	7.6700e-003	2.0200e-003	1.1000e-004	2.1300e-003	0.0000	8.9206	8.9206	5.4000e-004	0.0000	8.9341
Waste						0.0000	0.0000		0.0000	0.0000	0.1888	0.0000	0.1888	0.0112	0.0000	0.4677
Water						0.0000	0.0000		0.0000	0.0000	0.0564	1.1519	1.2082	5.8400e-003	1.5000e-004	1.3978
Total	8.2400e-003	0.0138	0.0357	1.1000e-004	7.5500e-003	1.9000e-004	7.7400e-003	2.0200e-003	1.8000e-004	2.2000e-003	0.2452	15.4646	15.7097	0.0177	2.1000e-004	16.2130

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	5.3921	5.3921	2.0000e-004	6.0000e-005	5.4134
Mobile	3.0900e-003	0.0130	0.0352	1.0000e-004	7.6500e-003	1.2000e-004	7.7700e-003	2.0500e-003	1.1000e-004	2.1600e-003	0.0000	9.0285	9.0285	5.4000e-004	0.0000	9.0421
Waste						0.0000	0.0000		0.0000	0.0000	0.0717	0.0000	0.0717	4.2400e-003	0.0000	0.1777
Water						0.0000	0.0000		0.0000	0.0000	0.0451	0.9765	1.0216	4.6700e-003	1.2000e-004	1.1734
Total	8.2600e-003	0.0139	0.0360	1.1000e-004	7.6500e-003	1.9000e-004	7.8400e-003	2.0500e-003	1.8000e-004	2.2300e-003	0.1169	15.3971	15.5139	9.6500e-003	1.8000e-004	15.8066

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	-0.24	-0.72	-0.93	0.00	-1.32	0.00	-1.29	-1.49	0.00	-1.36	52.34	0.44	1.25	45.60	14.29	2.51

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.0900e-003	0.0130	0.0352	1.0000e-004	7.6500e-003	1.2000e-004	7.7700e-003	2.0500e-003	1.1000e-004	2.1600e-003	0.0000	9.0285	9.0285	5.4000e-004	0.0000	9.0421
Unmitigated	3.0700e-003	0.0129	0.0349	1.0000e-004	7.5500e-003	1.2000e-004	7.6700e-003	2.0200e-003	1.1000e-004	2.1300e-003	0.0000	8.9206	8.9206	5.4000e-004	0.0000	8.9341

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	11.03	2.46	1.05	20,026	20,284
Total	11.03	2.46	1.05	20,026	20,284

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.3531	4.3531	1.8000e-004	4.0000e-005	4.3683
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.3531	4.3531	1.8000e-004	4.0000e-005	4.3683
Natural Gas Mitigated	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452
Natural Gas Unmitigated	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
General Office Building	19470	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452
Total		1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452

Mitigated

	Natural Gas 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					
General Office Building	19470	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452
Total		1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0390	1.0390	2.0000e-005	2.0000e-005	1.0452

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	13320	4.3531	1.8000e-004	4.0000e-005	4.3683
Total		4.3531	1.8000e-004	4.0000e-005	4.3683

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	13320	4.3531	1.8000e-004	4.0000e-005	4.3683
Total		4.3531	1.8000e-004	4.0000e-005	4.3683

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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	1.0216	4.6700e-003	1.2000e-004	1.1734
Unmitigated	1.2082	5.8400e-003	1.5000e-004	1.3978

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.177734 / 0.108934	1.2082	5.8400e-003	1.5000e-004	1.3978
Total		1.2082	5.8400e-003	1.5000e-004	1.3978

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.142187 / 0.102289	1.0216	4.6700e-003	1.2000e-004	1.1734
Total		1.0216	4.6700e-003	1.2000e-004	1.1734

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0717	4.2400e-003	0.0000	0.1777
Unmitigated	0.1888	0.0112	0.0000	0.4677

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.93	0.1888	0.0112	0.0000	0.4677
Total		0.1888	0.0112	0.0000	0.4677

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.3534	0.0717	4.2400e-003	0.0000	0.1777
Total		0.0717	4.2400e-003	0.0000	0.1777

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

City of Oceanside Overlay Project

Air Quality and Greenhouse Gas Assessment

Title 24 Energy Savings Adjustment

Nonresidential

% savings over Title 24 (2016)	% savings over Title 24 (2013)
0%	5.0%
5%	9.8%
10%	14.5%
15%	19.3%
20%	24.0%

Residential

% savings over Title 24 (2016)	% savings over Title 24 (2013)
0%	28.0%
5%	31.6%
10%	35.2%
15%	38.8%
20%	42.4%

Energy Use Factors Adjustment

Nonresidential % savings over Title 24 (2013) =	5.0%
Residential % savings over Title 24 (2013) =	28.0%

	T24 Electricity	NT24 Electricity	Lighting Electricity	T24 NG	NT24 NG
Title 24 (2013 - CalEEMod Default)					
Apartments Mid Rise	246.93	3,277.06	741.44	4,688.00	4,180.00
Fast Food w/ Drive-Through	8.63	23.69	6.97	36.10	138.46
High-Turnover Sit Down Rest.	8.63	23.69	6.97	36.10	138.46
Strip Mall (Retail)	3.34	3.16	6.39	1.15	1.09
General Office Building	4.88	4.97	3.91	16.07	4.20
Title 24 (2016)					
Apartments High Rise	177.79	3,277.06	533.84	3,375.36	4,180.00
Fast Food w/ Drive-Through	8.20	23.69	6.62	34.30	138.46
High-Turnover Sit Down Rest.	8.20	23.69	6.62	34.30	138.46
Strip Mall (Retail)	3.17	3.16	6.07	1.09	1.09
General Office Building	4.64	4.97	3.71	15.27	4.20

Sources:

CalEEMod Version 2016.3.1.

California Energy Commission, 2016 Building Energy Efficiency Standards, Adoption Hearing, June 10, 2015.