

City of Los Angeles

2501 Olympic Boulevard Project

Air Quality and Greenhouse Gas Study



November 2016

E n v i r o n m e n t a l S c i e n t i s t s P l a n n e r s E n g i n e e r s

2501 Olympic Boulevard Project

Air Quality and Greenhouse Gas Study

Prepared for:

N.Y. Properties, LLC
1433 Griffith Avenue
Los Angeles, CA 90021

Prepared with the assistance of:

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

November 2016

This report is printed on 50% recycled paper.

2501 W. Olympic Boulevard Project

AIR QUALITY & GREENHOUSE GAS EMISSIONS STUDY

Table of Contents

	Page
PROJECT DESCRIPTION	1
AIR QUALITY BACKGROUND & SETTING	2
Methodology and Significance Thresholds.....	6
Air Quality Impacts	9
GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS.....	13
Methodology and Significance Thresholds.....	13
Greenhouse Gas Emissions Impacts.....	15
REFERENCES	20
List of Tables	
Table 1 Design Features	2
Table 2 Federal and State Ambient Air Quality Standards.....	3
Table 3 Ambient Air Quality at the North Main Street Monitoring Station.....	5
Table 4 SCAQMD LSTs for Construction (SRA-2)	8
Table 5 Estimated Construction Maximum Daily Air Pollutant Emissions	10
Table 6 Project Operational Emissions.....	12
Table 7 Estimated Construction Emissions of Greenhouse Gases	16
Table 8 Combined Annual Emissions of Greenhouse Gases	16
Table 9 Consistency with Applicable City of Los Angeles Sustainability Plan (pLAn) Goals.....	17
Appendices	
Appendix A: Greenhouse Gas Modeling Results	
Appendix B: Traffic Study Memorandum of Understanding	



This page intentionally left blank



2501 W. Olympic Boulevard Project

Air Quality and Greenhouse Gas Study

This report presents an analysis of the potential air quality and greenhouse gas (GHG) emissions impacts associated with the proposed 2501 W. Olympic Boulevard project (project) located in Los Angeles, California. The report has been prepared by Rincon Consultants, Inc. for use by the N.Y. Properties, LLC in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's air quality and GHG emissions and the associated impacts. This analysis considers both temporary impacts that would result from project construction and potential long-term impacts associated with the location and operation of the proposed project.

PROJECT DESCRIPTION

The project involves the construction of a seven-story mixed-use building, with a total floor area of 178,430 square feet, with four levels of subterranean parking, and one above-grade level. The proposed lot area is 51,949 square feet, located at 2501 W. Olympic Boulevard, in the City of Los Angeles, California. The City of Los Angeles would be the lead CEQA agency for this project.

The project would include 173 residential units, 36,180 square feet of commercial retail space, 288 total parking spaces, 173 bicycle parking spaces, and 21,855 square feet of private and common space such as a rooftop deck. Of the 173 residential units, 20 would be affordable to very-low income communities with rental costs below market rate. The design also includes end-of-trip facilities for cyclists (toilets, commercial showers, a locker room, and a work area designated for bicycle maintenance).

The project site is situated within a highly urbanized environment including multi-family residences, commercial buildings, and other urban amenities. Adjacent and surrounding land uses include developments ranging from two to six stories, including residential, commercial, restaurant, retail, and mixed use. The project site is located on *Clark and Bryan's Westmoreland* Tract, including Lots 7, 8, 9, 26, 27, and 28 for a foot print of 35,723 square feet. Lots 9 and 26 are currently zoned C2-2 while Lots 7, 8, 27, and 28 are zoned R4-1. The project site is currently a bare grade lot with partial asphalt paving which would be removed prior to excavation and grading. In total, the project would require the removal of approximately 65,000 cubic yards of soil to accommodate the four levels of subterranean parking.

Table 1 provides a brief summary of the project's design features.

Table 1
Design Features

Design Feature	Additional Details	Total Units
Residential Housing Units	Market rate units	153
	Affordable/ very-low income units	20
	<i>Total</i>	173 units (142,250 sf)
Parking	Vehicle spaces	288
	Bicycle spaces	173
Commercial Space	Retail Space	36,180 sf

AIR QUALITY BACKGROUND & SETTING

This section analyzes the proposed project's temporary and long-term impacts to local and regional air quality. Both temporary impacts related to construction and long-term impacts associated with operation of the project are discussed.

Local Climate and Meteorology

The California Air Resources Board (CARB) has established 14 air basins, statewide. The project area is located within the South Coast Air Basin (SCAB), which is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate within the SCAB is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the SCAB is primarily influenced by meteorology and a wide range of emissions sources, such as dense urban population centers, extensive vehicular traffic, and industrial operations.

Air pollutant emissions within the SCAB are generated primarily by anthropogenic (human-generated) stationary and mobile sources. Stationary sources can be divided into two major subcategories: point sources and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or smoke stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and the consumption or use of consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, gasoline-powered landscape maintenance equipment, and self-propelled construction equipment. Air pollutants can also be generated by the non-human natural environment such as wildfires, ocean spray, or when high winds suspend fine dust particles in the air.

Air Quality Standards

The federal and state governments have established ambient air quality standards for the protection of public health. The United State Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the Air Resources Board (CARB) is the state equivalent in the California EPA. County-level Air Pollution Control Districts (APCDs) provide local management of air quality. The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 15 air basins statewide. The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), suspended particulate matter (PM₁₀), PM_{2.5}, and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. Table 2 lists the current federal and state standards for regulated pollutants.

The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency in the SCAB, and is responsible for attainment planning related to criteria air pollutants, and for district rule development and enforcement. The SCAB is designated in nonattainment for the federal and state one-hour and eight-hour ozone standards, the federal and state PM₁₀ standards, the federal 24-hour PM_{2.5} standard, and the state and federal annual PM_{2.5} standard. The SCAB is designated unclassifiable/attainment for all other federal and state standards. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Table 2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	---	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	---
Lead	30-Day Average	---	1.5 µg/m ³
	3-Month Average	0.15 µg/m ³	---

ppm = parts per million;

µg/m³ = micrograms per cubic meter

Source: CARB, May 2016, Ambient Air Quality Standards

<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>



Ozone. Ground-level ozone (O_3) is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG^1). NO_x is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory disease (asthma) and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, people who exercise strenuously outdoors, and economically disadvantaged communities.

Carbon Monoxide. CO is a local pollutant that is found in high concentrations near fossil fuel combustion equipment such as an idling engine or other sources such as a furnace, gas stove, or a fireplace. The primary source of CO (a colorless, odorless, poisonous gas) is automobile traffic. Elevated concentrations, therefore, are usually only found near urban areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2 , creating the mixture of NO and NO_2 commonly called NO_x . Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (which measures no more than 10 microns in diameter) and $PM_{2.5}$, (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and $PM_{2.5}$ can be different. Major anthropogenic (human-made) sources of PM_{10} are industrial agricultural operations, other industrial processes, fossil fuel combustion, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural non-human sources include windblown dust, wildfire smoke, and sea spray salt. The finer, $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering

¹ Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Current Air Quality

The SCAB monitoring station located nearest to the project site is the Los Angeles-North Main Street monitoring station located approximately 4.6 miles northeast of the project site. Table 3 indicates the number of days each of the standards has been exceeded at this station in each of the last three years for which data is available. As shown, the ozone concentration did not exceed state one-hour standards in 2013, but the concentrations did exceed standards on three days in 2014 and on two days in 2015. The PM_{2.5} concentration exceeded federal standards on one day in 2013, six days in 2014, and seven days in 2015. No exceedances of either the state or federal standards for NO₂ or CO have occurred at the monitoring station in the last three years.

Table 3
Ambient Air Quality at the North Main Street Monitoring Station

Pollutant	2013	2014	2015
Ozone (ppm), Worst Hour	0.081	0.113	0.104
Number of days of State exceedances (>0.09 ppm)	0	3	2
Number of days of Federal exceedances (>0.12 ppm)	0	0	0
Nitrogen Dioxide (ppb) - Worst Hour	90.3	82.1	79.1
Number of days of State exceedances (>0.25 ppm)	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average	*	*	*
Number of days of above State or Federal standard (>9.0 ppm)	*	*	*
Particulate Matter <2.5 microns, µg/m ³ , Worst 24 Hours	43.1	59.9	56.4
Number of days above Federal standard (>35 µg/m ³)	1	6	7

Data collected for the Los Angeles North Main Street monitoring station

** There was insufficient (or no) data available to determine the value.*

Source: CARB Top Four Summary available at <http://www.arb.ca.gov/adam/topfour/topfour1.php>

Air Quality Management Plan

Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. SCAQMD staff is currently developing the 2016 AQMP. The 2012 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2007 AQMP. The SCAQMD adopted the 2012 AQMP in February 2013.

The Final 2012 AQMP also addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models. This Plan

builds upon the approaches taken in the 2007 AQMP for the South Coast Air Basin for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the urgent need to engage in interagency coordinated planning to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act. The Final 2012 AQMP also includes a discussion of the emerging issues of ultrafine particle and near-roadway exposures, an analysis of the energy supply and demand issues that face the Basin and their relationship to air quality. The Plan also includes new demonstrations of 1-hour ozone attainment and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements².

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under age 14, the elderly over age 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. Therefore, the majority of sensitive receptor locations are schools and hospitals. Sensitive receptors that could potentially be affected by air quality impacts associated with project construction include Leo Politi Elementary School located approximately 400 feet west of the project site, Hoover Street Elementary School located approximately 0.3 miles north of the project site, MacArthur Park Primary Center School located approximately 0.5 miles northeast of the project site, Berendo Middle School located approximately 0.6 miles west of the project site, and Tenth Street Elementary School and Layola Law School, both located approximately 0.7 miles southeast of the project site.

The nearest sensitive receptor to the project site is Leo Politi Elementary School, located on W. Olympic Boulevard and Arapahoe Street, approximately 400 feet from site boundary. Because the project doesn't involve substantial new point sources of emissions on-site, air pollutant emissions associated with long-term use of the site would not be location-specific, but rather would be a contribution to the regional airshed.

Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's *CEQA Air Quality Handbook* (1993). The handbook includes thresholds for emissions associated with both construction and operation of project.

The construction activities associated with development would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. Some of this equipment would be used during grading activities as well as when structures are constructed. This analysis assumes that all construction equipment used would be diesel-powered. The regional construction emissions associated with development of the project were calculated using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2 developed for the SCAQMD by estimating the types and

² The 2012 AQMP is incorporated by reference and available to download at <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>.

number of pieces of equipment that would be used on-site during each of the construction phases. These construction emissions are analyzed using the regional thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*.

Operational emissions associated with existing and proposed on-site development were estimated using CalEEMod. Operational emissions include mobile source emissions, emissions from natural gas combustion, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of on-site development. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings. To determine whether a regional air quality impact would occur, the increase in emissions is compared to the SCAQMD's recommended regional thresholds for operational emissions.

Regional Thresholds. To determine whether a project would have a significant impact to air quality, Appendix G of the *CEQA Guidelines* questions whether a project would:

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

The SCAQMD has developed specific numeric thresholds that apply to projects within the South Coast Air Basin. The SCAQMD has established the following significance thresholds for temporary construction activities within the South Coast Air Basin:

- 75 pounds per day of ROG
- 100 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of PM₁₀
- 55 pounds per day of PM_{2.5}

The SCAQMD has also established the following significance thresholds for long-term project operation within the South Coast Air Basin:

- 55 pounds per day of ROG
- 55 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀
- 55 pounds per day of PM_{2.5}

Localized Significance Thresholds. In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's

Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation. LSTs have been developed for NO_x, CO, PM₁₀ and PM_{2.5}. LSTs are not applicable to mobile sources such as cars on a roadway (SCAQMD, June 2003). As such, LSTs for operational emissions do not apply to on-site development, as the majority of emissions would be generated by cars on the roadways as opposed to on-site activity such as natural gas combustion and area sources.

LSTs have been developed for emissions within construction areas up to five acres in size. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres. The project site is approximately 1.15 acres and is located in Source Receptor Area 2 (SRA-2) for Central Los Angeles (SCAQMD, 2008). As described above, the sensitive receptor closest to the project site is the Leo Politi Elementary School approximately 400 feet from the project site. The SCAQMD's publication, *Final Localized Significance Thresholds*, Table C-1, provides threshold information for projects with boundaries located approximately 80, 160, 320, 640, and 1,600 feet from the nearest receptor. Because the nearest receptor is approximately 400 feet away, the 320 foot threshold for 1-acre projects was utilized to provide a conservative analysis. LSTs for construction on a 1.15-acre site in SRA-2 are shown in Table 4.

Table 4
SCAQMD LSTs for Construction (SRA-2)

Pollutant	Allowable emissions (lbs/day) from a 1-acre site in SRA-2 for a receptor 320 feet away
Gradual conversion of NO _x to NO ₂	121
CO	1,233
PM ₁₀	27
PM _{2.5}	8

Source: SCAQMD, October 2009, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2> accessed online June 2016

Regulatory Compliance Measures and Project Design Features. The project would be required to comply with all applicable regulatory standards. In particular, the project would comply with City of Los Angeles Green Building Code as well as with all applicable provisions of the 2013 CALGreen Code, in addition to SCAQMD Rules 403 and 1113 all other applicable provisions of the District.

Air Quality Impacts

Construction Impacts

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust emissions from heavy construction vehicles and soil hauling trucks, in addition to ROG that would be released during the drying phase upon application of architectural coatings. Construction would generally consist of grading, erection of the proposed buildings, paving, and architectural coating. Although the project site is currently developed, site preparation (i.e., vegetation clearing and grubbing) were included in the CalEEMod run to provide a conservative estimate of potential construction emissions.

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. The project would require the removal of approximately 65,000 cubic yards of soil during the excavation and grading process in order to construct the proposed subterranean parking. The construction emissions modeling assumes compliance with SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located within the SCAB. Therefore, the following conditions, which are required by Rule 403, were included in CalEEMod assumptions for the site preparation and grading phases of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. In addition, a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide, shall be utilized to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of

high winds (20 miles per hour or greater, as measured continuously over a one-hour period).

5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

The architectural coating phase involves the greatest release of ROG. The emissions modeling also includes the use of low-VOC paint (100 g/L for non-flat coatings) as required by SCAQMD Rule 1113.

Table 5 summarizes the estimated maximum daily emissions of pollutants during each year of the construction period with compliance with the above described requirements.

Table 5
Estimated Construction Maximum Daily Air Pollutant Emissions

Construction Phase ¹	Maximum Emissions (lbs/day)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
2017	4.1	33.0	29.8	4.3	2.6
2018	11.7	32.0	37.7	4.3	2.3
2019	11.2	21.9	30.4	4.0	1.8
Total	27.0	86.8	98.0	12.6	6.7
SCAQMD Thresholds	75	100	550	150	55
Threshold Exceeded?	No	No	No	No	No
Maximum On-site lbs/day	N/A	24.2	15.9	3.9	2.5
Local Significance Threshold	N/A	121	1,233	27	8
Threshold Exceeded?	N/A	No	No	No	No

Notes: All calculations were made using CalEEMod. See the Appendix A for calculations. Grading, Paving, Building Construction and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Numbers may not add up due to rounding error.

1. Grading phases incorporate anticipated emissions reductions from the conditions listed above, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions from the conditions listed above, which are required by Rule 1113.

2. LSTs are for a 1.25-acre project in SRA-2 within a distance of 3 feet from the site boundary.

As shown in Table 5, emissions of ROG, CO, and NO_x would not exceed SCAQMD significance thresholds. In addition, with adherence to the conditions listed above, as required by SCAQMD Rule 403, emissions of fugitive dust (PM₁₀ and PM_{2.5}) would not exceed SCAQMD regional or localized significance thresholds.

Long-Term Regional Impacts

AQMP Consistency. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development



of the AQMP. The 2012 AQMP, which is the most recent AQMP adopted by the SCAQMD, incorporates local city general plans and the Southern California Association of Government's (SCAG) Regional Transportation Plan socioeconomic forecast projections of regional population, housing and employment growth.

The project involves the construction of a residential development, which would cause a direct increase in the City's population. According to data provided by the California Department of Finance (DOF), the estimated population of the City of Los Angeles is 4,030,904 and the average persons per household is 2.88 (DOF, 2016). As the project would involve the construction of 173 dwelling units, it could potentially add 498 residents (173 dwelling units x 2.88 people/dwelling unit). SCAG forecasts that the population of the City of Los Angeles will increase by 221,200 new residents between 2008 and 2020, for a total of 3,991,700 residents in 2020 and further increase by 328,900 new residents between 2020 and 2035, for a total of 4,320,600 residents in 2035 (SCAG, 2012). The addition of 498 new residents to the City of Los Angeles would equal 0.2% of the City's total projected population growth through 2020 and 0.2% of the City's total projected population growth through 2035. The level of population growth associated with the project was anticipated in SCAG's long-term population forecasts and would not exceed official regional population projections. Therefore, the project would not generate growth beyond AQMP forecasts. The project would be consistent with the AQMP and this impact would be less than significant

Carbon Monoxide Hotspot Analysis. A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1hr CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

The total ADT for the intersection closest to the project, W. Olympic Boulevard/Vermont Avenue, is approximately 40,877 vehicles, which is less than the 100,000 limit (City of Los Angeles, 2016). In addition, the proposed project would add approximately 1,911 daily trips, based on the trip summary information Traffic Study – Memorandum of Understanding (MOU). Furthermore, due to stricter vehicle emissions standards in newer cars and new technology that increases fuel economy, CO emission factors under future land use conditions would be substantially lower than those under existing conditions. Thus, even though there would be more vehicle trips under the proposed project than under existing conditions, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the one-hour or eight-hour ambient air quality standards for CO.

In addition, the Bay Area Air Quality Management District (BAAQMD) has established a screening threshold. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour – or 24,000 vehicles per hour where vertical and/or horizontal air does not mix – in order to generate a significant CO impact (BAAQMD 2011). The trips generated by the project would be well below the threshold and would not cause the intersection to host 100,000 vehicles per day. Localized air quality impacts related to CO hot spots would therefore be less than significant.

Operational Air Pollutant Emissions

Table 6 summarizes estimated emissions associated with operation of the project. The majority of project-related operational emissions would be due to vehicle trips to and from the site, followed by energy use. Trip generation rates generated in the Traffic Study – MOU (Appendix B) were used to calculate mobile emissions associated with the project. Based on the provided data, the project is estimated to result in 1,911 trips per day and approximately 3.3 million annual VMT.

Table 6
Project Operational Emissions

Emissions Source	Estimated Emissions (lbs/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area	6.7	0.2	14.3	<0.1	<0.1	<0.1
Energy (Natural Gas Consumption, and, Landscaping, Consumer Products)	<0.1	0.3	0.1	<0.1	<0.1	<0.1
Mobile	4.7	9.2	40.2	0.1	7.0	2.0
Total lbs/day	11.4	9.6	54.7	0.1	7.1	2.1
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

See Appendix A for CalEEMod computer model output. Note: Numbers may not add up due to rounding. Numbers may not add up due to rounding error

As shown in Table 6, project-generated emissions would not exceed the SCAQMD thresholds for ROG, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. Therefore, air quality impacts associated with operation of the project would be less than significant.

Toxic Air Contaminants

The California Air Resources Board's (CARB's) *Air Quality and Land Use Handbook: A Community Health Perspective* (April 2005) recommends against siting sensitive receptors within 500 feet of a freeway, or near other major sources of toxic air contaminants (TACs), such as rail yards, distribution centers, ports, or refineries. The primary concern with respect to freeway adjacency is the long-term effect of diesel exhaust particulates, a toxic air contaminant, on sensitive receptors. The primary source of diesel exhaust particulates is heavy-duty trucks on freeways and high-volume arterial roadways. The project is located approximately one mile from both Interstate 10 and Interstate 110, and there are no rail yards, distribution centers, ports, refineries, or other major sources of TACs in the vicinity. Although the project is would be a sensitive receptor, the project site is not located near TAC sources that would result in substantial health risks to residents or office occupants.

Odors

The 1993 SCAQMD CEQA Air Quality Handbook identifies land uses associated with odor complaints. Residential and mixed (office space) uses are not identified on Figure 5-5, Land Uses Associated with Odor Complaints, of the SCAQMD CEQA Air Quality Handbook. The project does not propose any specific odor-generating uses or features. Therefore, the project would not result in objectionable odors affecting a substantial number of people.

GREENHOUSE GAS EMISSIONS IMPACT ANALYSIS

Methodology and Significance Thresholds

Based on Appendix G of the *State CEQA Guidelines*, impacts related to GHG emissions from the project would be significant if the project would:

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*
- b) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). However, neither the SCAQMD nor the City of Los Angeles has adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has yet been adopted. The SCAQMD has a recommended threshold of 3,000 metric tons of CO₂e per year. The project's annual operational GHG emissions are expected to be below the SCAQMD threshold; therefore, the project's contribution to cumulative impacts related to GHG emissions and climate change would not be cumulatively considerable.

Study Methodology.

Calculations of CO₂, CH₄, and N₂O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98.9 percent of all GHG emissions by volume (IPCC, 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis. However, because the project is a mixed use development, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Emissions of all GHGs are converted into their equivalent

GWP in terms of CO₂ (CO₂e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total calculated CO₂e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA, 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009).

This analysis conforms to the methodologies recommended by the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (January 2008). The analysis focuses on CO₂, N₂O, and CH₄ as these are the GHG emissions that onsite development would generate in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis. However, the quantity of fluorinated gases would not be significant since fluorinated gases are primarily associated with industrial processes. Calculations were based on the methodologies discussed in the CAPCOA white paper (January 2008) and included the use of the California Climate Action Registry General Reporting Protocol (January 2009).

GHG emissions associated with the project were calculated using CalEEMod (see Appendix A for calculations).

Operational Emissions. CalEEMod provides operational emissions of CO₂, N₂O, and CH₄. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (*Compilation of Air Pollutant Emissions Factors*) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide, 2013). The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. This analysis calculates GHG emissions by quantifying the project's amenities and design features and also takes into account current state and federal measures that are intended to reduce GHG emissions. State and federal measures that are built into the emissions model calculation include Title 24 Energy Standards, Pavley (Clean Car Standards) and Low Carbon Fuel Standards.

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from ARB, U.S. EPA, and emission factor values provided by the local air district (CalEEMod User Guide 2013).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide 2013). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle). This data represents a conservative estimate, based on the assumption that residents will decrease consumption of single use projects and increase diversion efforts in accordance with the zero waste goal discussed in the Los Angeles pLAN and Los Angeles Sanitation's Solid Waste Integrated Resources Plan (SWIRP) Zero Waste Plan.

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California.

For mobile sources, CO₂ and CH₄ emissions were quantified in CalEEMod. Because CalEEMod does not calculate N₂O emissions from mobile sources, N₂O emissions were quantified using the California Climate Action Registry General Reporting Protocol (CAPCOA 2009) direct emissions factors for mobile combustion (see Appendix A for calculations). The estimate of total daily trips associated with the project was based on a Traffic Study – MOU completed on July 22, 2016 and trip rates were calculated and extrapolated to derive total annual mileage in CalEEMod. See Appendix A for the CalEEMod outputs and Appendix B for the Traffic Study MOU. Emission rates for N₂O emissions were based on the vehicle mix output generated by CalEEMod and the emission factors found in the California Climate Action Registry General Reporting Protocol.

Construction Emissions. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, “more study is needed to make this assessment or to develop separate thresholds for construction activity” (CAPCOA 2008). Nevertheless, air districts such as the SCAQMD (2011) have recommended amortizing construction-related emissions over a 30-year period in conjunction with the project's operational emissions.

CalEEMod provides an estimate of emissions associated with the construction period, based on parameters such as the duration of construction activity, area of disturbance, and anticipated equipment to be utilized during construction. These standard assumptions were modified to include more specific parameters, based on information provided by the applicant. For example, the overall construction phase was expanded from 12 to 24 months, the grading phase was extended to accommodate the removal of 65,000 cubic yards of soil, and the architectural coating phase was extended to take place concurrently with the construction of the seven story building. Truck trips hauling soil during the 65,000 cubic yard excavation process and the operation of heavy equipment throughout the construction period would be the primary sources of emissions. Project construction was estimated to be completed within approximately 24 months. For this analysis, it was assumed that construction would commence May 1, 2017 and would be completed May 1, 2019. The SCAQMD has recommended amortizing construction-related emissions over a 30-year period in conjunction with the project's operational emissions. CalEEMod results and assumptions can be found in Appendix A.

Greenhouse Gas Emissions Impacts

Construction Emissions. Construction of the project would generate GHG emissions, primarily due to the operation of construction equipment. Based on CalEEMod results, construction activity for the project would generate an estimated 1,239.7 metric tons of CO₂e (as shown in Table 7). Amortized over a 30-year period (the assumed lifetime of a project, based on SCAQMD recommendations), construction of the project would generate approximately 41.3 metric tons of CO₂e per year.

Table 7
Estimated Construction Emissions of Greenhouse Gases

Year	Annual Emissions (Metric Tons CO ₂ e)
2017	406.1
2018	636.4
2019	197.2
Total	1,239.7
Amortized over 30 years	41.3

Refer to Appendix A for CalEEMod results.

Long Term Operational Emissions. Operation of the project would result in GHG emissions from the following primary sources: mobile (on-road mobile vehicle traffic generated by the project), energy (electricity and natural gas used on-site), solid waste disposal by the land use, water usage by the land use, and area sources (landscaping equipment). Table 8 shows the operational GHG emissions from the project, in combination with the amortized construction emissions.

Table 8
Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (Metric Tons CO ₂ e)
Construction	41.3
Operational	
Area	3.0
Energy	1,037.6
Solid Waste	26.7
Water	172.9
Mobile (CO₂ and CH₄)	
CO ₂ and CH ₄	1,285.3
N ₂ O	75.1
Total	2,641.9

Sources: See Appendix for calculations and for GHG emission factor assumptions.

Note: Totals may not sum up due to rounding.

As shown in Table 8, the combined annual emissions would total approximately 2,641.9 metric tons of CO₂e per year beginning in the first operational year (2020). The annual emissions would not exceed the applicable SCAQMD guidance standard of 3,000 metric tons per year. The majority of the project's GHG emissions are associated with vehicular travel (51%) and energy consumption (40%).

Consistency with GHG Reduction Goals

The project is consistent with the City's pLAN and includes several design elements to reduce the cumulative effects of GHG emissions resulting from the project. Table 9 identifies specific measures determined by the City of Los Angeles as ways to achieve GHG reduction goals and describes the project's consistency and applicability with the CAP goals.

Table 9
Consistency with Applicable City of Los Angeles Sustainability Plan (pLAN) Goals

Measure	Project Consistency
Energy Efficient Buildings	
Advance energy-efficiency and green-building programs <ul style="list-style-type: none"> Expand LA Better Buildings Challenge to new sectors, including the City's affordable housing stocks .. Increase participation in energy-efficiency and green business certification programs Assess options for private-sector green-building policy to incentivize or require LEED Silver or better new construction and major rehabilitation 	Consistent The project would comply with or exceed the Title 24 Standards for Building Energy Efficiency that are in effect at the time of development. These standards include actions such as insulation certified by the Department of Consumer Affairs, Bureau of Home Furnishing and Thermal Insulation to reduce energy necessary to regulate building temperature and natural gas systems only installed if they do not have a continuously burning pilot light, to save energy.
Waste and Landfills	
Execute and expand plans to increase landfill diversion and recycling <ul style="list-style-type: none"> Execute the Solid Waste Integrated Resources Plan's series of initiatives to develop blue, green and black bin infrastructure; fund specialized programs and pilots; and move the City toward zero waste Expand pilots for residential organics collection by 2017 and commercial by 2018 (e.g., four-bin, combined green bin, in-sink) Continue aggressive recycling education 	Consistent The project would include 290 square feet of space for the collection and storage of recycling, compost, and refuse materials generated in each unit. Separate dumpsters would be used to keep landfill-bound waste, recyclables, and compost separate.
Mobility and Transit	
Improve pedestrian and bicycle infrastructure and other sustainable transport, emphasizing connections to mass transit <ul style="list-style-type: none"> Support implementation of Metro's first-mile, last-mile strategic plan Build bike infrastructure (lane network, racks, districts) per DOT strategic plan and 2035 Mobility Element Build out the LA River Bike Path (See "Urban Ecosystem" chapter) .. Site and build multi modal Integrated Mobility Hubs with infrastructure for car share, shared rides, and bike share Support strategic mode shift opportunities for 	Consistent. The project would be mixed-use and located less than 100 feet of two bus lines (28 and 603) and therefore contributes to the stated transit oriented development goal. In addition, the project would include 231 bicycle parking spaces and end of trip facilities. The building would also increase diversity and density including new retail spaces, potentially reducing commutes for some residents.



Table 9
Consistency with Applicable City of Los Angeles Sustainability Plan (pLAn) Goals

Measure	Project Consistency
<p>short trips with more Transportation Management Organizations (TMOs), car sharing, and improved pedestrian connectivity for major events and destinations</p> <ul style="list-style-type: none"> Upgrade Jordan Downs pedestrian and bike infrastructure 	
Preparedness and Resiliency	
<p>Safeguard buildings through seismic retrofits outlined in the City's "Resilience by Design" earthquake preparedness plan</p> <ul style="list-style-type: none"> Assess and retrofit vulnerable pre-1980 soft story and concrete buildings Implement a Seismic Safety Rating System Create a Back-To-Business inspection program 	<p>Consistent</p> <p>The development would comply with all applicable building codes.</p>
Air Quality	
<p>Improve air quality and reduce toxicity in LA's most affected neighborhoods</p> <ul style="list-style-type: none"> Implement and expand Clean Up Green Up program to include one or more additional neighborhoods — including from South Los Angeles — with high CalEnviroScreen scores Create neighborhood-level air quality monitoring and define metrics (e.g., PM10 and ozone) Create working group to prioritize and execute local air quality mitigation steps in highly impacted neighborhoods Reduce emissions from goods movement with a focus on low-income neighborhoods Improve LA air quality in general (see Air quality chapter) 	<p>Consistent</p> <p>The project would be mixed-use and could reduce emissions from VMT and goods movement. The project would be a transit oriented development project with multiple options for alternatives to the car, including cycling, and walking.</p> <p>The project would also include 21,855 sf of private and common open areas including decks, roof top gardens and other landscaped open spaces.</p>
Livable Neighborhoods	
<p>Strengthen pedestrian and bike safety</p> <ul style="list-style-type: none"> Support the Department of Transportation Strategic Plan to help address pedestrian/bike safety through: <ul style="list-style-type: none"> Adoption of "Vision Zero" policy and establishment of a multi-agency safety task force. Incorporation of safety for pedestrians into all street designs and redesigns Collection of consistent uniform data to drive improvements in most dangerous locations 	<p>Consistent</p> <p>The project would include interior pathways that could be used by residents or patrons visiting the commercial component of the project. In addition, there will be 173 on-site bicycle parking spaces to encourage cycling, and end of trip facilities to incentivize cycling.</p>

The project's design includes components and locational characteristics that would reduce the

project's overall GHG emissions related to construction, waste generation, water consumption, energy use, and transportation. The project site is located within approximately a one mile radius or less of approximately seven different bus lines including the 28, 603, 66, 204, 30, 330, 200, and the West Lake/MacArthur Park Metro station. The building would be a high density, mixed use project that would potentially reduce reliance on automobiles for residents electing to cycle rather than drive. These project components and locational characteristics were incorporated into the CalEEmod estimations estimate, and contribute with the project's consistency with the City of Los Angeles pLAn. As a result, the proposed project would not exceed local GHG emissions thresholds and therefore the proposed project would not conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the GHGs emissions in the City of Los Angeles.



REFERENCES

- Association of Environmental Professionals (AEP). *Alternative Approaches to Analyzing Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*. June 29, 2007.
- Association of Environmental Professionals. California Environmental Quality Act (CEQA) Statute and Guidelines. 2012
- Bay Area Air Quality Management District. California Environmental Quality Act: Air Quality Guidelines. June 2010. Available at:
http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_December%202010.ashx
- California Air Pollution Control Officers Association. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA)*. January 2008.
- California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, August 2010.
- California Air Resources Board. *California Greenhouse Gas Emission Inventory – 2015 Edition*. June 2015. Available at: <http://www.arb.ca.gov/cc/inventory/data/data.htm>
- California Air Resources Board. *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the “LEV III” Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles*. December 7, 2011. Retrieved from:
<http://www.arb.ca.gov/regact/2012/leviiiighg2012/levisor.pdf>
- California Air Resources Board. *2020 BAU Forecast, Version: May 27, 2014*. Available at:
http://www.arb.ca.gov/cc/inventory/data/tables/2020_bau_forecast_by_scoping_category_2014-05-22.pdf
- California Air Resources Board. AB 32 Scoping Plan Website. Updated June 2014. Accessed September, 2014. Available: <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>
- California Air Resources Board (CARB). *Frequently Asked Questions About Executive Order B-30-15*. April 2015. Available at:
http://www.arb.ca.gov/newsrel/2030_carbon_target_adaptation_faq.pdf
- California Climate Action Registry (CCAR) General Reporting Protocol, *Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, January 2009.
- California Climate Change Center. *Climate Scenarios for California*. 2006.
- California Climate Change Center. *The Impacts of Sea-Level Rise on the California Coast*. May 2009.

- California Department of Water Resources. October 2008. *Managing an Uncertain Future: Climate Change Adaption Strategies for California's Water*.
- California Energy Commission. *Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature*. March 2009.
- California Environmental Protection Agency (CalEPA). *Climate Action Team Biennial Report*. Final Report. April 2010.
- California Environmental Protection Agency (CalEPA), March 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*.
- California Natural Resources Agency. December 2009. *2009 California Climate Adaption Strategy*.
- City of Los Angeles, Sustainable City Plan (pLAn), April 2015.
- County of Los Angeles, Department of Regional Planning. Unincorporated Los Angeles County Community Climate Action Plan 2020. August 2015.
- Intergovernmental Panel on Climate Change [IPCC], 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Intergovernmental Panel on Climate Change [IPCC], 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Intergovernmental Panel on Climate Change [IPCC], 2014: Summary for Policymakers. In: *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Los Angeles Department of Transportation, City of. 2016: Current Count Data. Accessed July 2016. Retrieved from <http://ladot.lacity.org/node/576>
- National Oceanic and Atmospheric Administration (NOAA). *Annual Greenhouse Gas Index*. September 2010, updated 2014. Accessed September 2014. Retrieved from: <http://www.esrl.noaa.gov/gmd/aggi/aggi.html>.
- National Aeronautics and Space Administration (NASA). Earth Observatory. July 2, 2007. *If we Immediately Stopped Emitting Greenhouse Gases, Would Global Warming Stop?* Retrieved from: <http://earthobservatory.nasa.gov/blogs/climateqa/would-gw-stop-with-greenhouse->

gases/.

Parmesan, C. August 2006. *Ecological and Evolutionary Responses to Recent Climate Change*.

Southern California Association of Governments, 2012. Regional Transportation Plan. April 2012.

Southern California Association of Governments, 2001. Employment Density Study, Summary Report, Prepared by The Natelson Company, Inc.

South Coast Air Quality Management District. California Emissions Estimator Model User Guide. Prepared by ENVIRON International Corporation. February 2011.

South Coast Air Quality Management District (SCAQMD). CEQA Air Quality Handbook. Tables A9-11-A and A9-12-A. November 1993.

SCAQMD. Final Localized Significance Threshold Methodology. June 2003. Revised July 2008.

SCAQMD. Final 2007 Air Quality Management Plan. June 2007. Udall, Brad. "Recent Research on the Effects of Climate Change on the Colorado River," in Intermountain West Climate Summary (May 2007) [Appendix O, Exhibit 7] (citing N. Christensen and D.P. Lettenamair, "A Multimodel Ensemble Approach to Assessment of Climate Change Impacts on the Hydrology and Water Resources of the Colorado River Basin," Hydrology and Earth System Sciences Discussion 3:1-44 (2006).

United Nations (n.d.). November 2011. *Gateway to the United Nations Systems Work on Climate Change: Durban conference delivers breakthrough in international community's response to climate change*. Accessed September 2014. Retrieved from:
<http://www.un.org/climatechange/blog/2011/12/durban-climate-conference-delivers-breakthrough/>

United Nations Framework Convention on Climate Change (UNFCCC). August 2007. *United Nations Framework Convention on Climate Change*.

United Nations Framework Convention on Climate Change (November 2011). *Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its sixteenth session*.

United Nations Framework Convention on Climate Change. March 15, 2012. *Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011*.

United Nations Framework Convention on Climate Change. December 12, 2015. *Adoption of the Paris Agreement*. Accessed at
<https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

United States Environmental Protection Agency (U.S. EPA). *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012*. U. S. EPA #430-R-11-005. April 2014. Available:
<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

Worland, J. December 12, 2015. What to Know About the Historic 'Paris Agreement' on Climate Change. *Time*. Retrieved from <http://time.com/4146764/paris-agreement-climate-cop-21/>

World Meteorological Organization. March 2013. A summary of current and climate change findings and figures.

Appendix A



*Greenhouse Gas Emissions Modeling Results:
CalEEMod Modeling Results
N₂O Emissions Calculation Sheet*

Olympic Hoover Mixed-Use

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	288.00	Space	0.00	115,200.00	0
Apartments Mid Rise	173.00	Dwelling Unit	0.24	142,250.00	495
Strip Mall	36.18	1000sqft	0.91	36,180.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on site plans: 1.15 acres, 7 stories, 4 subterranean & 1 above-grade parking levels

Construction Phase - 24 months, 65,000 cy of soil export via 46,000 12-wheeler truckloads. Grading estimated at 50 trips per day / 4,600 trips = 92 days. Architectural coating phase would occur concurrently with construction.

Trips and VMT - 65,000 cy removed in 4,600 trips, 15 yds/trip, 50 trips/day, Downtown Diversion-WM Olympic Blvd, accepts soil/C&D waste

Grading - Applicant provided an estimated 65,000 cubic yards of material to be exported

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - per Traffic MOU 7/22/2016

Woodstoves - per SCAQMD Rule 4 no wood burning devices in new developments

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Water 2x/day per SCAQMD Rule 403

Mobile Land Use Mitigation - per site plans

Mobile Commute Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation - 2013 T 24 exceeds 2008 T 24 by 25%

Water Mitigation -

Waste Mitigation - AB341 goal of 75% by 2020 and AB 1862 mandatory organics collection. City of LA Sanitation Zero Waste Plan, mandatory recycling

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	10.00	208.00
tblConstructionPhase	NumDays	200.00	419.00
tblConstructionPhase	NumDays	4.00	92.00

tblConstructionPhase	PhaseEndDate	2/15/2019	5/1/2019
tblConstructionPhase	PhaseEndDate	5/1/2019	5/1/2018
tblConstructionPhase	PhaseStartDate	5/2/2018	7/15/2018
tblConstructionPhase	PhaseStartDate	4/18/2019	4/18/2018
tblFireplaces	NumberGas	147.05	0.00
tblFireplaces	NumberNoFireplace	17.30	0.00
tblFireplaces	NumberWood	8.65	0.00
tblGrading	AcresOfGrading	34.50	1.50
tblGrading	MaterialExported	0.00	65,000.00
tblLandUse	LandUseSquareFeet	173,000.00	142,250.00
tblLandUse	LotAcreage	2.59	0.00
tblLandUse	LotAcreage	4.55	0.24
tblLandUse	LotAcreage	0.83	0.91
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,600.00
tblTripsAndVMT	VendorTripNumber	43.00	46.00
tblTripsAndVMT	WorkerTripNumber	185.00	191.00
tblTripsAndVMT	WorkerTripNumber	37.00	38.00
tblVehicleTrips	ST_TR	7.16	5.98
tblVehicleTrips	ST_TR	42.04	22.04
tblVehicleTrips	SU_TR	6.07	5.98
tblVehicleTrips	SU_TR	20.43	22.04
tblVehicleTrips	WD_TR	6.59	5.98
tblVehicleTrips	WD_TR	44.32	22.04
tblWoodstoves	NumberCatalytic	8.65	0.00
tblWoodstoves	NumberNoncatalytic	8.65	0.00

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					
2017	0.2918	2.5211	2.3416	4.7400e-003	0.3579	0.1121	0.4700	0.1555	0.1053	0.2609	0.0000	405.2702	405.2702	0.0401	0.0000	406.1117
2018	0.9569	3.0196	3.9631	8.0900e-003	0.3364	0.1591	0.4955	0.0901	0.1534	0.2435	0.0000	634.9834	634.9834	0.0651	0.0000	636.3510
2019	0.4711	0.8550	1.1923	2.5700e-003	0.1097	0.0435	0.1532	0.0294	0.0421	0.0714	0.0000	196.8362	196.8362	0.0186	0.0000	197.2272
Total	1.7198	6.3957	7.4970	0.0154	0.8040	0.3147	1.1187	0.2749	0.3008	0.5758	0.0000	1,237.0898	1,237.0898	0.1238	0.0000	1,239.6898

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	0.2918	2.5211	2.3416	4.7400e-003	0.2380	0.1121	0.3501	0.0907	0.1053	0.1961	0.0000	405.2701	405.2701	0.0401	0.0000	406.1115
2018	0.9569	3.0196	3.9631	8.0900e-003	0.3364	0.1591	0.4955	0.0901	0.1534	0.2435	0.0000	634.9831	634.9831	0.0651	0.0000	636.3506
2019	0.4711	0.8550	1.1923	2.5700e-003	0.1097	0.0435	0.1532	0.0294	0.0421	0.0714	0.0000	196.8361	196.8361	0.0186	0.0000	197.2271
Total	1.7198	6.3957	7.4970	0.0154	0.6841	0.3147	0.9987	0.2101	0.3008	0.5110	0.0000	1,237.0893	1,237.0893	0.1238	0.0000	1,239.6893

	ROG	NOx	CO	SO2	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	14.92	0.00	10.72	23.57	0.00	11.25	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3119	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825
Energy	6.6900e-003	0.0574	0.0257	3.7000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	1,139.8180	1,139.8180	0.0266	6.4600e-003	1,142.3799
Mobile	0.8950	2.4322	9.6834	0.0282	1.9150	0.0382	1.9532	0.5125	0.0353	0.5477	0.0000	1,978.2150	1,978.2150	0.0715	0.0000	1,979.7155
Waste						0.0000	0.0000		0.0000	0.0000	23.8657	0.0000	23.8657	1.4104	0.0000	53.4845
Water						0.0000	0.0000		0.0000	0.0000	4.4262	155.3145	159.7407	0.4583	0.0115	172.9276
Total	2.2136	2.5103	11.5033	0.0286	1.9150	0.0527	1.9677	0.5125	0.0497	0.5622	28.2919	3,276.2699	3,304.5617	1.9696	0.0180	3,351.4898

2.2 Overall Operational

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	1.1955	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825
Energy	5.4300e-003	0.0466	0.0208	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	1,035.2866	1,035.2866	0.0242	5.7800e-003	1,037.5873
Mobile	0.8011	1.7034	7.3123	0.0183	1.2217	0.0254	1.2471	0.3269	0.0234	0.3504	0.0000	1,284.2559	1,284.2559	0.0479	0.0000	1,285.2622
Waste						0.0000	0.0000		0.0000	0.0000	11.9328	0.0000	11.9328	0.7052	0.0000	26.7422
Water						0.0000	0.0000		0.0000	0.0000	4.4262	155.3145	159.7407	0.4582	0.0115	172.9205
Total	2.0020	1.7707	9.1274	0.0187	1.2217	0.0390	1.2607	0.3269	0.0370	0.3640	16.3590	2,477.7794	2,494.1384	1.2384	0.0173	2,525.4947

	ROG	NOx	CO	SO2	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	9.56	29.46	20.65	34.74	36.20	26.01	35.93	36.20	25.55	35.26	42.18	24.37	24.52	37.13	3.84	24.65

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	5/2/2017	5	2	
2	Grading	Grading	5/3/2017	9/7/2017	5	92	
3	Building Construction	Building Construction	9/8/2017	4/17/2019	5	419	
4	Paving	Paving	4/18/2018	5/1/2018	5	10	
5	Architectural Coating	Architectural Coating	7/15/2018	5/1/2019	5	208	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 288,056; Residential Outdoor: 96,019; Non-Residential Indoor: 227,070; Non-Residential Outdoor: 75,690 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	4,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	191.00	46.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3100e-003	0.0242	0.0159	2.0000e-005		1.3100e-003	1.3100e-003		1.2000e-003	1.2000e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997
Total	2.3100e-003	0.0242	0.0159	2.0000e-005	5.8000e-003	1.3100e-003	7.1100e-003	2.9500e-003	1.2000e-003	4.1500e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997

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	3.0000e-005	4.0000e-005	4.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792
Total	3.0000e-005	4.0000e-005	4.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792

3.2 Site Preparation - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6100e-003	0.0000	2.6100e-003	1.3300e-003	0.0000	1.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3100e-003	0.0242	0.0159	2.0000e-005		1.3100e-003	1.3100e-003		1.2000e-003	1.2000e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997
Total	2.3100e-003	0.0242	0.0159	2.0000e-005	2.6100e-003	1.3100e-003	3.9200e-003	1.3300e-003	1.2000e-003	2.5300e-003	0.0000	1.5895	1.5895	4.9000e-004	0.0000	1.5997

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	3.0000e-005	4.0000e-005	4.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792
Total	3.0000e-005	4.0000e-005	4.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0791	0.0791	0.0000	0.0000	0.0792

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					0.2122	0.0000	0.2122	0.1149	0.0000	0.1149	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0867	0.9103	0.6062	6.5000e-004		0.0490	0.0490		0.0451	0.0451	0.0000	60.0581	60.0581	0.0184	0.0000	60.4445
Total	0.0867	0.9103	0.6062	6.5000e-004	0.2122	0.0490	0.2613	0.1149	0.0451	0.1600	0.0000	60.0581	60.0581	0.0184	0.0000	60.4445

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	0.0389	0.6156	0.4858	1.7000e-003	0.0394	9.0200e-003	0.0485	0.0108	8.3000e-003	0.0191	0.0000	152.5513	152.5513	1.1000e-003	0.0000	152.5744
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3200e-003	1.9600e-003	0.0203	5.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.6375	3.6375	1.9000e-004	0.0000	3.6414
Total	0.0402	0.6176	0.5062	1.7500e-003	0.0435	9.0500e-003	0.0525	0.0119	8.3300e-003	0.0202	0.0000	156.1888	156.1888	1.2900e-003	0.0000	156.2158

3.3 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0955	0.0000	0.0955	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0867	0.9103	0.6062	6.5000e-004		0.0490	0.0490		0.0451	0.0451	0.0000	60.0580	60.0580	0.0184	0.0000	60.4445
Total	0.0867	0.9103	0.6062	6.5000e-004	0.0955	0.0490	0.1445	0.0517	0.0451	0.0968	0.0000	60.0580	60.0580	0.0184	0.0000	60.4445

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	0.0389	0.6156	0.4858	1.7000e-003	0.0394	9.0200e-003	0.0485	0.0108	8.3000e-003	0.0191	0.0000	152.5513	152.5513	1.1000e-003	0.0000	152.5744
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3200e-003	1.9600e-003	0.0203	5.0000e-005	4.0400e-003	3.0000e-005	4.0700e-003	1.0700e-003	3.0000e-005	1.1000e-003	0.0000	3.6375	3.6375	1.9000e-004	0.0000	3.6414
Total	0.0402	0.6176	0.5062	1.7500e-003	0.0435	9.0500e-003	0.0525	0.0119	8.3300e-003	0.0202	0.0000	156.1888	156.1888	1.2900e-003	0.0000	156.2158

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	0.1197	0.7739	0.5796	8.9000e-004		0.0496	0.0496		0.0479	0.0479	0.0000	74.7417	74.7417	0.0157	0.0000	75.0710
Total	0.1197	0.7739	0.5796	8.9000e-004		0.0496	0.0496		0.0479	0.0479	0.0000	74.7417	74.7417	0.0157	0.0000	75.0710

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	0.0152	0.1539	0.2058	4.0000e-004	0.0115	2.3500e-003	0.0138	3.2700e-003	2.1700e-003	5.4400e-003	0.0000	36.1526	36.1526	2.6000e-004	0.0000	36.1580
Worker	0.0278	0.0411	0.4275	1.0400e-003	0.0849	7.0000e-004	0.0856	0.0225	6.4000e-004	0.0232	0.0000	76.4605	76.4605	3.9500e-003	0.0000	76.5435
Total	0.0430	0.1951	0.6333	1.4400e-003	0.0963	3.0500e-003	0.0994	0.0258	2.8100e-003	0.0286	0.0000	112.6131	112.6131	4.2100e-003	0.0000	112.7015

3.4 Building Construction - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1197	0.7739	0.5796	8.9000e-004		0.0496	0.0496		0.0479	0.0479	0.0000	74.7416	74.7416	0.0157	0.0000	75.0709
Total	0.1197	0.7739	0.5796	8.9000e-004		0.0496	0.0496		0.0479	0.0479	0.0000	74.7416	74.7416	0.0157	0.0000	75.0709

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	0.0152	0.1539	0.2058	4.0000e-004	0.0115	2.3500e-003	0.0138	3.2700e-003	2.1700e-003	5.4400e-003	0.0000	36.1526	36.1526	2.6000e-004	0.0000	36.1580
Worker	0.0278	0.0411	0.4275	1.0400e-003	0.0849	7.0000e-004	0.0856	0.0225	6.4000e-004	0.0232	0.0000	76.4605	76.4605	3.9500e-003	0.0000	76.5435
Total	0.0430	0.1951	0.6333	1.4400e-003	0.0963	3.0500e-003	0.0994	0.0258	2.8100e-003	0.0286	0.0000	112.6131	112.6131	4.2100e-003	0.0000	112.7015

3.4 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	0.3370	2.2599	1.8056	2.8600e-003		0.1375	0.1375		0.1327	0.1327	0.0000	239.3103	239.3103	0.0481	0.0000	240.3194
Total	0.3370	2.2599	1.8056	2.8600e-003		0.1375	0.1375		0.1327	0.1327	0.0000	239.3103	239.3103	0.0481	0.0000	240.3194

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	0.0457	0.4552	0.6352	1.3000e-003	0.0370	7.1500e-003	0.0441	0.0106	6.5800e-003	0.0171	0.0000	114.5373	114.5373	8.3000e-004	0.0000	114.5548
Worker	0.0804	0.1202	1.2476	3.3600e-003	0.2735	2.1800e-003	0.2757	0.0726	2.0200e-003	0.0746	0.0000	237.1769	237.1769	0.0118	0.0000	237.4249
Total	0.1261	0.5754	1.8827	4.6600e-003	0.3104	9.3300e-003	0.3198	0.0832	8.6000e-003	0.0918	0.0000	351.7142	351.7142	0.0126	0.0000	351.9797

3.4 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3370	2.2599	1.8056	2.8600e-003		0.1375	0.1375		0.1327	0.1327	0.0000	239.3100	239.3100	0.0481	0.0000	240.3191
Total	0.3370	2.2599	1.8056	2.8600e-003		0.1375	0.1375		0.1327	0.1327	0.0000	239.3100	239.3100	0.0481	0.0000	240.3191

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	0.0457	0.4552	0.6352	1.3000e-003	0.0370	7.1500e-003	0.0441	0.0106	6.5800e-003	0.0171	0.0000	114.5373	114.5373	8.3000e-004	0.0000	114.5548
Worker	0.0804	0.1202	1.2476	3.3600e-003	0.2735	2.1800e-003	0.2757	0.0726	2.0200e-003	0.0746	0.0000	237.1769	237.1769	0.0118	0.0000	237.4249
Total	0.1261	0.5754	1.8827	4.6600e-003	0.3104	9.3300e-003	0.3198	0.0832	8.6000e-003	0.0918	0.0000	351.7142	351.7142	0.0126	0.0000	351.9797

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0872	0.6115	0.5178	8.5000e-004		0.0351	0.0351		0.0339	0.0339	0.0000	70.1588	70.1588	0.0135	0.0000	70.4412
Total	0.0872	0.6115	0.5178	8.5000e-004		0.0351	0.0351		0.0339	0.0339	0.0000	70.1588	70.1588	0.0135	0.0000	70.4412

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	0.0128	0.1238	0.1810	3.8000e-004	0.0109	2.0000e-003	0.0129	3.1100e-003	1.8400e-003	4.9500e-003	0.0000	33.1317	33.1317	2.4000e-004	0.0000	33.1368
Worker	0.0218	0.0325	0.3375	9.9000e-004	0.0807	6.3000e-004	0.0813	0.0214	5.9000e-004	0.0220	0.0000	67.3086	67.3086	3.2600e-003	0.0000	67.3771
Total	0.0345	0.1563	0.5185	1.3700e-003	0.0916	2.6300e-003	0.0942	0.0245	2.4300e-003	0.0270	0.0000	100.4404	100.4404	3.5000e-003	0.0000	100.5139

3.4 Building Construction - 2019**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	0.0872	0.6115	0.5178	8.5000e-004		0.0351	0.0351		0.0339	0.0339	0.0000	70.1587	70.1587	0.0135	0.0000	70.4411
Total	0.0872	0.6115	0.5178	8.5000e-004		0.0351	0.0351		0.0339	0.0339	0.0000	70.1587	70.1587	0.0135	0.0000	70.4411

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	0.0128	0.1238	0.1810	3.8000e-004	0.0109	2.0000e-003	0.0129	3.1100e-003	1.8400e-003	4.9500e-003	0.0000	33.1317	33.1317	2.4000e-004	0.0000	33.1368
Worker	0.0218	0.0325	0.3375	9.9000e-004	0.0807	6.3000e-004	0.0813	0.0214	5.9000e-004	0.0220	0.0000	67.3086	67.3086	3.2600e-003	0.0000	67.3771
Total	0.0345	0.1563	0.5185	1.3700e-003	0.0916	2.6300e-003	0.0942	0.0245	2.4300e-003	0.0270	0.0000	100.4404	100.4404	3.5000e-003	0.0000	100.5139

3.5 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	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0173	6.0173	1.8400e-003	0.0000	6.0558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0173	6.0173	1.8400e-003	0.0000	6.0558

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	2.1000e-004	3.1000e-004	3.2500e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6185	0.6185	3.0000e-005	0.0000	0.6192
Total	2.1000e-004	3.1000e-004	3.2500e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6185	0.6185	3.0000e-005	0.0000	0.6192

3.5 Paving - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0172	6.0172	1.8400e-003	0.0000	6.0558
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.0300e-003	0.0515	0.0444	7.0000e-005		3.0100e-003	3.0100e-003		2.7800e-003	2.7800e-003	0.0000	6.0172	6.0172	1.8400e-003	0.0000	6.0558

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	2.1000e-004	3.1000e-004	3.2500e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6185	0.6185	3.0000e-005	0.0000	0.6192
Total	2.1000e-004	3.1000e-004	3.2500e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6185	0.6185	3.0000e-005	0.0000	0.6192

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.1214	0.1122	1.8000e-004		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003	0.0000	15.4472	15.4472	1.4700e-003	0.0000	15.4780
Total	0.4811	0.1214	0.1122	1.8000e-004		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003	0.0000	15.4472	15.4472	1.4700e-003	0.0000	15.4780

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	7.4200e-003	0.0111	0.1151	3.1000e-004	0.0252	2.0000e-004	0.0254	6.7000e-003	1.9000e-004	6.8800e-003	0.0000	21.8760	21.8760	1.0900e-003	0.0000	21.8989
Total	7.4200e-003	0.0111	0.1151	3.1000e-004	0.0252	2.0000e-004	0.0254	6.7000e-003	1.9000e-004	6.8800e-003	0.0000	21.8760	21.8760	1.0900e-003	0.0000	21.8989

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0181	0.1214	0.1122	1.8000e-004		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003	0.0000	15.4472	15.4472	1.4700e-003	0.0000	15.4780
Total	0.4811	0.1214	0.1122	1.8000e-004		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003	0.0000	15.4472	15.4472	1.4700e-003	0.0000	15.4780

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	7.4200e-003	0.0111	0.1151	3.1000e-004	0.0252	2.0000e-004	0.0254	6.7000e-003	1.9000e-004	6.8800e-003	0.0000	21.8760	21.8760	1.0900e-003	0.0000	21.8989
Total	7.4200e-003	0.0111	0.1151	3.1000e-004	0.0252	2.0000e-004	0.0254	6.7000e-003	1.9000e-004	6.8800e-003	0.0000	21.8760	21.8760	1.0900e-003	0.0000	21.8989

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1067	11.1067	9.4000e-004	0.0000	11.1264
Total	0.3445	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1067	11.1067	9.4000e-004	0.0000	11.1264

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	4.9000e-003	7.3100e-003	0.0759	2.2000e-004	0.0181	1.4000e-004	0.0183	4.8200e-003	1.3000e-004	4.9500e-003	0.0000	15.1304	15.1304	7.3000e-004	0.0000	15.1458
Total	4.9000e-003	7.3100e-003	0.0759	2.2000e-004	0.0181	1.4000e-004	0.0183	4.8200e-003	1.3000e-004	4.9500e-003	0.0000	15.1304	15.1304	7.3000e-004	0.0000	15.1458

3.6 Architectural Coating - 2019

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	0.3329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1066	11.1066	9.4000e-004	0.0000	11.1263
Total	0.3445	0.0798	0.0801	1.3000e-004		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	11.1066	11.1066	9.4000e-004	0.0000	11.1263

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	4.9000e-003	7.3100e-003	0.0759	2.2000e-004	0.0181	1.4000e-004	0.0183	4.8200e-003	1.3000e-004	4.9500e-003	0.0000	15.1304	15.1304	7.3000e-004	0.0000	15.1458
Total	4.9000e-003	7.3100e-003	0.0759	2.2000e-004	0.0181	1.4000e-004	0.0183	4.8200e-003	1.3000e-004	4.9500e-003	0.0000	15.1304	15.1304	7.3000e-004	0.0000	15.1458

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8011	1.7034	7.3123	0.0183	1.2217	0.0254	1.2471	0.3269	0.0234	0.3504	0.0000	1,284.2559	1,284.2559	0.0479	0.0000	1,285,2622
Unmitigated	0.8950	2.4322	9.6834	0.0282	1.9150	0.0382	1.9532	0.5125	0.0353	0.5477	0.0000	1,978.2150	1,978.2150	0.0715	0.0000	1,979,7155

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,034.54	1,034.54	1034.54	3,535,180	2,255,293
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	797.41	797.41	797.41	1,517,143	967,872
Total	1,831.95	1,831.95	1,831.95	5,052,323	3,223,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510092	0.059583	0.181091	0.139410	0.042694	0.006692	0.016202	0.032692	0.001943	0.002491	0.004392	0.000576	0.002140

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	981.5325	981.5325	0.0232	4.8000e-003	983.5062
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,073.5758	1,073.5758	0.0254	5.2500e-003	1,075.7346
NaturalGas Mitigated	5.4300e-003	0.0466	0.0208	3.0000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	53.7540	53.7540	1.0300e-003	9.9000e-004	54.0812
NaturalGas Unmitigated	6.6900e-003	0.0574	0.0257	3.7000e-004		4.6200e-003	4.6200e-003		4.6200e-003	4.6200e-003	0.0000	66.2422	66.2422	1.2700e-003	1.2100e-003	66.6453

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	61506	3.3000e-004	3.0200e-003	2.5300e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2822	3.2822	6.0000e-005	6.0000e-005	3.3022
Apartments Mid Rise	1.17983e+006	6.3600e-003	0.0544	0.0231	3.5000e-004		4.4000e-003	4.4000e-003		4.4000e-003	4.4000e-003	0.0000	62.9600	62.9600	1.2100e-003	1.1500e-003	63.3431
Total		6.6900e-003	0.0574	0.0257	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003	0.0000	66.2422	66.2422	1.2700e-003	1.2100e-003	66.6453

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	50561.5	2.7000e-004	2.4800e-003	2.0800e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6982	2.6982	5.0000e-005	5.0000e-005	2.7146
Apartments Mid Rise	956751	5.1600e-003	0.0441	0.0188	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003	0.0000	51.0559	51.0559	9.8000e-004	9.4000e-004	51.3666
Total		5.4300e-003	0.0466	0.0208	2.9000e-004		3.7500e-003	3.7500e-003		3.7500e-003	3.7500e-003	0.0000	53.7540	53.7540	1.0300e-003	9.9000e-004	54.0812

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	602260	335.4355	7.9200e-003	1.6400e-003	336.1100
Enclosed Parking with Elevator	776448	432.4517	0.0102	2.1100e-003	433.3212
Strip Mall	548851	305.6887	7.2200e-003	1.4900e-003	306.3033
Total		1,073.5758	0.0254	5.2400e-003	1,075.7346

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	594217	330.9557	7.8200e-003	1.6200e-003	331.6212
Enclosed Parking with Elevator	663552	369.5729	8.7300e-003	1.8100e-003	370.3161
Strip Mall	504530	281.0039	6.6400e-003	1.3700e-003	281.5689
Total		981.5325	0.0232	4.8000e-003	983.5062

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1955	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825
Unmitigated	1.3119	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825

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	0.1960					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0549	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825
Total	1.3119	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0796					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0549	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825
Total	1.1955	0.0207	1.7942	9.0000e-005		9.8600e-003	9.8600e-003		9.8600e-003	9.8600e-003	0.0000	2.9223	2.9223	2.8600e-003	0.0000	2.9825

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	159.7407	0.4582	0.0115	172.9205
Unmitigated	159.7407	0.4583	0.0115	172.9276

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.2716 / 7.10604	129.2912	0.3703	9.2900e-003	139.9455
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.67994 / 1.64255	30.4495	0.0880	2.2100e-003	32.9821
Total		159.7407	0.4583	0.0115	172.9276

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	11.2716 / 7.10604	129.2912	0.3702	9.2700e-003	139.9398
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.67994 / 1.64255	30.4495	0.0880	2.2000e-003	32.9807
Total		159.7407	0.4582	0.0115	172.9205

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.9328	0.7052	0.0000	26.7422
Unmitigated	23.8657	1.4104	0.0000	53.4845

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	79.58	16.1540	0.9547	0.0000	36.2022
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	37.99	7.7116	0.4557	0.0000	17.2823
Total		23.8657	1.4104	0.0000	53.4845

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	39.79	8.0770	0.4773	0.0000	18.1011
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	18.995	3.8558	0.2279	0.0000	8.6411
Total		11.9328	0.7052	0.0000	26.7422

9.0 Operational Offroad

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

10.0 Vegetation

Olympic Hoover Mixed-Use

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	288.00	Space	0.00	115,200.00	0
Apartments Mid Rise	173.00	Dwelling Unit	0.24	142,250.00	495
Strip Mall	36.18	1000sqft	0.91	36,180.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on site plans: 1.15 acres, 7 stories, 4 subterranean & 1 above-grade parking levels

Construction Phase - 24 months, 65,000 cy of soil export via 46,000 12-wheeler truckloads. Grading estimated at 50 trips per day / 4,600 trips = 92 days. Architectural coating phase would occur concurrently with construction.

Trips and VMT - 65,000 cy removed in 4,600 trips, 15 yds/trip, 50 trips/day, Downtown Diversion-WM Olympic Blvd, accepts soil/C&D waste

Grading - Applicant provided an estimated 65,000 cubic yards of material to be exported

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - per Traffic MOU 7/22/2016

Woodstoves - per SCAQMD Rule 4 no wood burning devices in new developments

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Water 2x/day per SCAQMD Rule 403

Mobile Land Use Mitigation - per site plans

Mobile Commute Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation - 2013 T 24 exceeds 2008 T 24 by 25%

Water Mitigation -

Waste Mitigation - AB341 goal of 75% by 2020 and AB 1862 mandatory organics collection. City of LA Sanitation Zero Waste Plan, mandatory recycling

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	10.00	208.00
tblConstructionPhase	NumDays	200.00	419.00
tblConstructionPhase	NumDays	4.00	92.00

tblConstructionPhase	PhaseEndDate	2/15/2019	5/1/2019
tblConstructionPhase	PhaseEndDate	5/1/2019	5/1/2018
tblConstructionPhase	PhaseStartDate	5/2/2018	7/15/2018
tblConstructionPhase	PhaseStartDate	4/18/2019	4/18/2018
tblFireplaces	NumberGas	147.05	0.00
tblFireplaces	NumberNoFireplace	17.30	0.00
tblFireplaces	NumberWood	8.65	0.00
tblGrading	AcresOfGrading	34.50	1.50
tblGrading	MaterialExported	0.00	65,000.00
tblLandUse	LandUseSquareFeet	173,000.00	142,250.00
tblLandUse	LotAcreage	2.59	0.00
tblLandUse	LotAcreage	4.55	0.24
tblLandUse	LotAcreage	0.83	0.91
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,600.00
tblTripsAndVMT	VendorTripNumber	43.00	46.00
tblTripsAndVMT	WorkerTripNumber	185.00	191.00
tblTripsAndVMT	WorkerTripNumber	37.00	38.00
tblVehicleTrips	ST_TR	7.16	5.98
tblVehicleTrips	ST_TR	42.04	22.04
tblVehicleTrips	SU_TR	6.07	5.98
tblVehicleTrips	SU_TR	20.43	22.04
tblVehicleTrips	WD_TR	6.59	5.98
tblVehicleTrips	WD_TR	44.32	22.04
tblWoodstoves	NumberCatalytic	8.65	0.00
tblWoodstoves	NumberNoncatalytic	8.65	0.00

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					
2017	4.0216	32.5258	29.8386	0.0590	5.8890	1.3075	7.1965	2.9774	1.2514	4.1803	0.0000	5,206.904 9	5,206.904 9	0.5414	0.0000	5,218.273 2
2018	11.6369	31.8359	37.6977	0.0741	2.8473	1.7283	4.2961	0.7608	1.6392	2.3258	0.0000	6,565.933 9	6,565.933 9	0.9245	0.0000	6,585.348 4
2019	11.2070	21.6956	30.4736	0.0672	2.8473	1.1119	3.9592	0.7608	1.0754	1.8362	0.0000	5,668.961 6	5,668.961 6	0.5276	0.0000	5,680.040 1
Total	26.8656	86.0572	98.0099	0.2003	11.5835	4.1477	15.4518	4.4989	3.9660	8.3423	0.0000	17,441.80 04	17,441.80 04	1.9934	0.0000	17,483.66 17

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	4.0216	32.5258	29.8386	0.0590	3.0368	1.3075	4.2995	1.3858	1.2514	2.5557	0.0000	5,206.904 9	5,206.904 9	0.5414	0.0000	5,218.273 2
2018	11.6369	31.8359	37.6977	0.0741	2.8473	1.7283	4.2961	0.7608	1.6392	2.3258	0.0000	6,565.933 9	6,565.933 9	0.9245	0.0000	6,585.348 4
2019	11.2070	21.6956	30.4736	0.0672	2.8473	1.1119	3.9592	0.7608	1.0754	1.8362	0.0000	5,668.961 6	5,668.961 6	0.5276	0.0000	5,680.040 1
Total	26.8656	86.0572	98.0099	0.2003	8.7313	4.1477	12.5549	2.9073	3.9660	6.7177	0.0000	17,441.80 04	17,441.80 04	1.9934	0.0000	17,483.66 17

	ROG	NOx	CO	SO2	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	24.62	0.00	18.75	35.38	0.00	19.47	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Energy	0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3400e-003	402.5418
Mobile	5.0241	12.4917	52.8772	0.1612	10.7166	0.2100	10.9266	2.8635	0.1937	3.0572		12,444.7017	12,444.7017	0.4330		12,453.7957
Total	12.3876	12.9720	67.3713	0.1639	10.7166	0.3142	11.0308	2.8635	0.2979	3.1614	0.0000	12,870.5791	12,870.5791	0.4660	7.3400e-003	12,882.6382

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Energy	0.0298	0.2552	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535
Mobile	4.4944	8.7875	38.7036	0.1046	6.8367	0.1393	6.9761	1.8268	0.1285	1.9553		8,076.4671	8,076.4671	0.2903		8,082.5638
Total	11.2133	9.2085	53.1713	0.1070	6.8367	0.2388	7.0755	1.8268	0.2280	2.0548	0.0000	8,426.9151	8,426.9151	0.3218	5.9500e-003	8,435.5180

	ROG	NOx	CO	SO2	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	9.48	29.01	21.08	34.75	36.20	24.01	35.86	36.20	23.47	35.00	0.00	34.53	34.53	30.94	18.94	34.52

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	5/2/2017	5	2	
2	Grading	Grading	5/3/2017	9/7/2017	5	92	
3	Building Construction	Building Construction	9/8/2017	4/17/2019	5	419	
4	Paving	Paving	4/18/2018	5/1/2018	5	10	
5	Architectural Coating	Architectural Coating	7/15/2018	5/1/2019	5	208	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 288,056; Residential Outdoor: 96,019; Non-Residential Indoor: 227,070; Non-Residential Outdoor: 75,690 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	4,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	191.00	46.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022		1,752.123 9	1,752.123 9	0.5369		1,763.397 7
Total	2.3109	24.2288	15.9299	0.0171	5.7996	1.3067	7.1063	2.9537	1.2022	4.1559		1,752.123 9	1,752.123 9	0.5369		1,763.397 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	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192

3.2 Site Preparation - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022	0.0000	1,752.123 9	1,752.123 9	0.5369		1,763.397 7
Total	2.3109	24.2288	15.9299	0.0171	2.6098	1.3067	3.9165	1.3292	1.2022	2.5314	0.0000	1,752.123 9	1,752.123 9	0.5369		1,763.397 7

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	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192

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					4.6138	0.0000	4.6138	2.4966	0.0000	2.4966			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.189 4	1,439.189 4	0.4410		1,448.449 6
Total	1.8844	19.7889	13.1786	0.0141	4.6138	1.0661	5.6799	2.4966	0.9808	3.4775		1,439.189 4	1,439.189 4	0.4410		1,448.449 6

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	0.8148	12.6993	9.3322	0.0369	0.8712	0.1959	1.0671	0.2386	0.1802	0.4188		3,659.284 7	3,659.284 7	0.0261		3,659.833 5
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	0.8448	12.7369	9.8018	0.0380	0.9606	0.1967	1.1572	0.2623	0.1809	0.4432		3,750.809 3	3,750.809 3	0.0306		3,751.452 6

3.3 Grading - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0762	0.0000	2.0762	1.1235	0.0000	1.1235			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.189 4	1,439.189 4	0.4410		1,448.449 6
Total	1.8844	19.7889	13.1786	0.0141	2.0762	1.0661	3.1423	1.1235	0.9808	2.1043	0.0000	1,439.189 4	1,439.189 4	0.4410		1,448.449 6

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	0.8148	12.6993	9.3322	0.0369	0.8712	0.1959	1.0671	0.2386	0.1802	0.4188		3,659.284 7	3,659.284 7	0.0261		3,659.833 5
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	0.8448	12.7369	9.8018	0.0380	0.9606	0.1967	1.1572	0.2623	0.1809	0.4432		3,750.809 3	3,750.809 3	0.0306		3,751.452 6

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

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	0.3522	3.6375	4.3152	0.0100	0.2876	0.0579	0.3455	0.0819	0.0532	0.1352		987.4689	987.4689	6.9600e-003		987.6152
Worker	0.7148	0.8980	11.2124	0.0270	2.1349	0.0172	2.1521	0.5662	0.0158	0.5820		2,185.1499	2,185.1499	0.1075		2,187.4073
Total	1.0671	4.5355	15.5276	0.0370	2.4225	0.0751	2.4976	0.6481	0.0691	0.7172		3,172.6188	3,172.6188	0.1145		3,175.0225

3.4 Building Construction - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497

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	0.3522	3.6375	4.3152	0.0100	0.2876	0.0579	0.3455	0.0819	0.0532	0.1352		987.4689	987.4689	6.9600e-003		987.6152
Worker	0.7148	0.8980	11.2124	0.0270	2.1349	0.0172	2.1521	0.5662	0.0158	0.5820		2,185.1499	2,185.1499	0.1075		2,187.4073
Total	1.0671	4.5355	15.5276	0.0370	2.4225	0.0751	2.4976	0.6481	0.0691	0.7172		3,172.6188	3,172.6188	0.1145		3,175.0225

3.4 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373
Total	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373

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	0.3304	3.3403	4.1113	9.9900e-003	0.2876	0.0546	0.3421	0.0819	0.0502	0.1321		970.9100	970.9100	6.9200e-003		971.0553
Worker	0.6445	0.8147	10.1875	0.0270	2.1349	0.0167	2.1517	0.5662	0.0155	0.5817		2,103.8413	2,103.8413	0.0998		2,105.9365
Total	0.9749	4.1550	14.2988	0.0370	2.4225	0.0713	2.4938	0.6481	0.0657	0.7138		3,074.7512	3,074.7512	0.1067		3,076.9918

3.4 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373
Total	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373

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	0.3304	3.3403	4.1113	9.9900e-003	0.2876	0.0546	0.3421	0.0819	0.0502	0.1321		970.9100	970.9100	6.9200e-003		971.0553
Worker	0.6445	0.8147	10.1875	0.0270	2.1349	0.0167	2.1517	0.5662	0.0155	0.5817		2,103.8413	2,103.8413	0.0998		2,105.9365
Total	0.9749	4.1550	14.2988	0.0370	2.4225	0.0713	2.4938	0.6481	0.0657	0.7138		3,074.7512	3,074.7512	0.1067		3,076.9918

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808		2,008.7495	2,008.7495	0.3850		2,016.8347
Total	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808		2,008.7495	2,008.7495	0.3850		2,016.8347

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	0.3129	3.0816	3.9569	9.9500e-003	0.2876	0.0518	0.3394	0.0819	0.0476	0.1295		951.9909	951.9909	6.7900e-003		952.1335
Worker	0.5932	0.7473	9.3628	0.0270	2.1349	0.0164	2.1514	0.5662	0.0152	0.5814		2,024.0772	2,024.0772	0.0934		2,026.0384
Total	0.9061	3.8288	13.3197	0.0369	2.4225	0.0682	2.4907	0.6481	0.0628	0.7110		2,976.0681	2,976.0681	0.1002		2,978.1719

3.4 Building Construction - 2019

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	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808	0.0000	2,008.7495	2,008.7495	0.3850		2,016.8347
Total	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808	0.0000	2,008.7495	2,008.7495	0.3850		2,016.8347

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	0.3129	3.0816	3.9569	9.9500e-003	0.2876	0.0518	0.3394	0.0819	0.0476	0.1295		951.9909	951.9909	6.7900e-003		952.1335
Worker	0.5932	0.7473	9.3628	0.0270	2.1349	0.0164	2.1514	0.5662	0.0152	0.5814		2,024.0772	2,024.0772	0.0934		2,026.0384
Total	0.9061	3.8288	13.3197	0.0369	2.4225	0.0682	2.4907	0.6481	0.0628	0.7110		2,976.0681	2,976.0681	0.1002		2,978.1719

3.5 Paving - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335,0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335,0833

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	0.0439	0.0555	0.6934	1.8400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.1934	143.1934	6.7900e-003		143.3360
Total	0.0439	0.0555	0.6934	1.8400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.1934	143.1934	6.7900e-003		143.3360

3.5 Paving - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335,0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335,0833

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	0.0439	0.0555	0.6934	1.8400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.1934	143.1934	6.7900e-003		143.3360
Total	0.0439	0.0555	0.6934	1.8400e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		143.1934	143.1934	6.7900e-003		143.3360

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	7.9512	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1282	0.1621	2.0268	5.3800e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		418.5653	418.5653	0.0199		418.9821
Total	0.1282	0.1621	2.0268	5.3800e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		418.5653	418.5653	0.0199		418.9821

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	7.9512	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1282	0.1621	2.0268	5.3800e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		418.5653	418.5653	0.0199		418.9821
Total	0.1282	0.1621	2.0268	5.3800e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		418.5653	418.5653	0.0199		418.9821

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	7.9190	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473

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	0.1180	0.1487	1.8628	5.3700e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		402.6960	402.6960	0.0186		403.0862
Total	0.1180	0.1487	1.8628	5.3700e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		402.6960	402.6960	0.0186		403.0862

3.6 Architectural Coating - 2019

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	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	7.9190	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473

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	0.1180	0.1487	1.8628	5.3700e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		402.6960	402.6960	0.0186		403.0862
Total	0.1180	0.1487	1.8628	5.3700e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		402.6960	402.6960	0.0186		403.0862

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4944	8.7875	38.7036	0.1046	6.8367	0.1393	6.9761	1.8268	0.1285	1.9553		8,076.467 1	8,076.467 1	0.2903		8,082.563 8
Unmitigated	5.0241	12.4917	52.8772	0.1612	10.7166	0.2100	10.9266	2.8635	0.1937	3.0572		12,444.70 17	12,444.70 17	0.4330		12,453.79 57

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,034.54	1,034.54	1034.54	3,535,180	2,255,293
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	797.41	797.41	797.41	1,517,143	967,872
Total	1,831.95	1,831.95	1,831.95	5,052,323	3,223,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510092	0.059583	0.181091	0.139410	0.042694	0.006692	0.016202	0.032692	0.001943	0.002491	0.004392	0.000576	0.002140

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0298	0.2552	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535
NaturalGas Unmitigated	0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3400e-003	402.5418

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	168.51	1.8200e-003	0.0165	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.8247	19.8247	3.8000e-004	3.6000e-004	19.9453
Apartments Mid Rise	3232.4	0.0349	0.2979	0.1268	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.2822	380.2822	7.2900e-003	6.9700e-003	382.5965
Total		0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3300e-003	402.5418

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.138525	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003		16.2970	16.2970	3.1000e-004	3.0000e-004	16.3962
Apartments Mid Rise	2.62123	0.0283	0.2416	0.1028	1.5400e-003		0.0195	0.0195		0.0195	0.0195		308.3805	308.3805	5.9100e-003	5.6500e-003	310.2573
Total		0.0298	0.2551	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Unmitigated	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4392	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789		25.7705	25.7705	0.0253		26.3008
Total	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4392	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789		25.7705	25.7705	0.0253		26.3008
Total	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Olympic Hoover Mixed-Use

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	288.00	Space	0.00	115,200.00	0
Apartments Mid Rise	173.00	Dwelling Unit	0.24	142,250.00	495
Strip Mall	36.18	1000sqft	0.91	36,180.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on site plans: 1.15 acres, 7 stories, 4 subterranean & 1 above-grade parking levels

Construction Phase - 24 months, 65,000 cy of soil export via 46,000 12-wheeler truckloads. Grading estimated at 50 trips per day / 4,600 trips = 92 days. Architectural coating phase would occur concurrently with construction.

Trips and VMT - 65,000 cy removed in 4,600 trips, 15 yds/trip, 50 trips/day, Downtown Diversion-WM Olympic Blvd, accepts soil/C&D waste

Grading - Applicant provided an estimated 65,000 cubic yards of material to be exported

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - per Traffic MOU 7/22/2016

Woodstoves - per SCAQMD Rule 4 no wood burning devices in new developments

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Water 2x/day per SCAQMD Rule 403

Mobile Land Use Mitigation - per site plans

Mobile Commute Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation - 2013 T 24 exceeds 2008 T 24 by 25%

Water Mitigation -

Waste Mitigation - AB341 goal of 75% by 2020 and AB 1862 mandatory organics collection. City of LA Sanitation Zero Waste Plan, mandatory recycling

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	10.00	208.00
tblConstructionPhase	NumDays	200.00	419.00
tblConstructionPhase	NumDays	4.00	92.00

tblConstructionPhase	PhaseEndDate	2/15/2019	5/1/2019
tblConstructionPhase	PhaseEndDate	5/1/2019	5/1/2018
tblConstructionPhase	PhaseStartDate	5/2/2018	7/15/2018
tblConstructionPhase	PhaseStartDate	4/18/2019	4/18/2018
tblFireplaces	NumberGas	147.05	0.00
tblFireplaces	NumberNoFireplace	17.30	0.00
tblFireplaces	NumberWood	8.65	0.00
tblGrading	AcresOfGrading	34.50	1.50
tblGrading	MaterialExported	0.00	65,000.00
tblLandUse	LandUseSquareFeet	173,000.00	142,250.00
tblLandUse	LotAcreage	2.59	0.00
tblLandUse	LotAcreage	4.55	0.24
tblLandUse	LotAcreage	0.83	0.91
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripNumber	8,125.00	4,600.00
tblTripsAndVMT	VendorTripNumber	43.00	46.00
tblTripsAndVMT	WorkerTripNumber	185.00	191.00
tblTripsAndVMT	WorkerTripNumber	37.00	38.00
tblVehicleTrips	ST_TR	7.16	5.98
tblVehicleTrips	ST_TR	42.04	22.04
tblVehicleTrips	SU_TR	6.07	5.98
tblVehicleTrips	SU_TR	20.43	22.04
tblVehicleTrips	WD_TR	6.59	5.98
tblVehicleTrips	WD_TR	44.32	22.04
tblWoodstoves	NumberCatalytic	8.65	0.00
tblWoodstoves	NumberNoncatalytic	8.65	0.00

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					
2017	4.0684	32.9884	29.8384	0.0572	5.8890	1.3075	7.1965	2.9774	1.2519	4.1803	0.0000	5,175.604 4	5,175.604 4	0.5415	0.0000	5,186.976 2
2018	11.6798	32.0017	37.6776	0.0723	2.8473	1.7288	4.2966	0.7608	1.6397	2.3263	0.0000	6,417.607 7	6,417.607 7	0.9247	0.0000	6,437.026 8
2019	11.2459	21.8556	30.3852	0.0651	2.8473	1.1124	3.9597	0.7608	1.0758	1.8366	0.0000	5,509.176 6	5,509.176 6	0.5278	0.0000	5,520.259 8
Total	26.9941	86.8458	97.9012	0.1946	11.5835	4.1487	15.4528	4.4989	3.9674	8.3432	0.0000	17,102.38 86	17,102.38 86	1.9940	0.0000	17,144.26 28

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	4.0684	32.9884	29.8384	0.0572	3.0368	1.3075	4.3000	1.3858	1.2519	2.5557	0.0000	5,175.604 4	5,175.604 4	0.5415	0.0000	5,186.976 2
2018	11.6798	32.0017	37.6776	0.0723	2.8473	1.7288	4.2966	0.7608	1.6397	2.3263	0.0000	6,417.607 7	6,417.607 7	0.9247	0.0000	6,437.026 8
2019	11.2459	21.8556	30.3852	0.0651	2.8473	1.1124	3.9597	0.7608	1.0758	1.8366	0.0000	5,509.176 6	5,509.176 6	0.5278	0.0000	5,520.259 8
Total	26.9941	86.8458	97.9012	0.1946	8.7313	4.1487	12.5563	2.9073	3.9674	6.7186	0.0000	17,102.38 86	17,102.38 86	1.9940	0.0000	17,144.26 28

	ROG	NOx	CO	SO2	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	24.62	0.00	18.74	35.38	0.00	19.47	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Energy	0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3400e-003	402.5418
Mobile	5.1874	13.1077	52.8438	0.1531	10.7166	0.2108	10.9273	2.8635	0.1944	3.0579		11,852.0672	11,852.0672	0.4336		11,861.1729
Total	12.5509	13.5880	67.3380	0.1558	10.7166	0.3150	11.0315	2.8635	0.2986	3.1621	0.0000	12,277.9445	12,277.9445	0.4665	7.3400e-003	12,290.0155

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Energy	0.0298	0.2552	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535
Mobile	4.6767	9.1864	40.1715	0.0994	6.8367	0.1401	6.9768	1.8268	0.1293	1.9561		7,692.6228	7,692.6228	0.2909		7,698.7314
Total	11.3956	9.6075	54.6391	0.1018	6.8367	0.2396	7.0763	1.8268	0.2287	2.0555	0.0000	8,043.0709	8,043.0709	0.3224	5.9500e-003	8,051.6856

	ROG	NOx	CO	SO2	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	9.20	29.29	18.86	34.69	36.20	23.95	35.85	36.20	23.42	35.00	0.00	34.49	34.49	30.90	18.94	34.49

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	5/1/2017	5/2/2017	5	2	
2	Grading	Grading	5/3/2017	9/7/2017	5	92	
3	Building Construction	Building Construction	9/8/2017	4/17/2019	5	419	
4	Paving	Paving	4/18/2018	5/1/2018	5	10	
5	Architectural Coating	Architectural Coating	7/15/2018	5/1/2019	5	208	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 288,056; Residential Outdoor: 96,019; Non-Residential Indoor: 227,070; Non-Residential Outdoor: 75,690 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	4,600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	191.00	46.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022		1,752.123 9	1,752.123 9	0.5369		1,763.397 7
Total	2.3109	24.2288	15.9299	0.0171	5.7996	1.3067	7.1063	2.9537	1.2022	4.1559		1,752.123 9	1,752.123 9	0.5369		1,763.397 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	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222
Total	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222

3.2 Site Preparation - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.6098	0.0000	2.6098	1.3292	0.0000	1.3292			0.0000			0.0000
Off-Road	2.3109	24.2288	15.9299	0.0171		1.3067	1.3067		1.2022	1.2022	0.0000	1,752.123 9	1,752.123 9	0.5369		1,763.397 7
Total	2.3109	24.2288	15.9299	0.0171	2.6098	1.3067	3.9165	1.3292	1.2022	2.5314	0.0000	1,752.123 9	1,752.123 9	0.5369		1,763.397 7

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	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222
Total	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222

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					4.6138	0.0000	4.6138	2.4966	0.0000	2.4966			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.189 4	1,439.189 4	0.4410		1,448.449 6
Total	1.8844	19.7889	13.1786	0.0141	4.6138	1.0661	5.6799	2.4966	0.9808	3.4775		1,439.189 4	1,439.189 4	0.4410		1,448.449 6

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	0.8572	13.1582	10.7608	0.0368	0.8712	0.1964	1.0675	0.2386	0.1806	0.4192		3,650.587 3	3,650.587 3	0.0265		3,651.143 7
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222
Total	0.8877	13.1996	11.1922	0.0379	0.9606	0.1971	1.1577	0.2623	0.1813	0.4436		3,736.415 0	3,736.415 0	0.0310		3,737.065 9

3.3 Grading - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0762	0.0000	2.0762	1.1235	0.0000	1.1235			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.189 4	1,439.189 4	0.4410		1,448.449 6
Total	1.8844	19.7889	13.1786	0.0141	2.0762	1.0661	3.1423	1.1235	0.9808	2.1043	0.0000	1,439.189 4	1,439.189 4	0.4410		1,448.449 6

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	0.8572	13.1582	10.7608	0.0368	0.8712	0.1964	1.0675	0.2386	0.1806	0.4192		3,650.587 3	3,650.587 3	0.0265		3,651.143 7
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0413	0.4314	1.0600e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		85.8277	85.8277	4.5000e-003		85.9222
Total	0.8877	13.1996	11.1922	0.0379	0.9606	0.1971	1.1577	0.2623	0.1813	0.4436		3,736.415 0	3,736.415 0	0.0310		3,737.065 9

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

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	0.3847	3.7273	5.2282	9.9300e-003	0.2876	0.0585	0.3460	0.0819	0.0538	0.1357		979.1738	979.1738	7.1800e-003		979.3246
Worker	0.7292	0.9862	10.2991	0.0253	2.1349	0.0172	2.1521	0.5662	0.0158	0.5820		2,049.1356	2,049.1356	0.1075		2,051.3930
Total	1.1139	4.7135	15.5273	0.0353	2.4225	0.0756	2.4981	0.6481	0.0696	0.7177		3,028.3094	3,028.3094	0.1147		3,030.7176

3.4 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497

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	0.3847	3.7273	5.2282	9.9300e-003	0.2876	0.0585	0.3460	0.0819	0.0538	0.1357		979.1738	979.1738	7.1800e-003		979.3246
Worker	0.7292	0.9862	10.2991	0.0253	2.1349	0.0172	2.1521	0.5662	0.0158	0.5820		2,049.1356	2,049.1356	0.1075		2,051.3930
Total	1.1139	4.7135	15.5273	0.0353	2.4225	0.0756	2.4981	0.6481	0.0696	0.7177		3,028.3094	3,028.3094	0.1147		3,030.7176

3.4 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373
Total	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172		2,021.4136	2,021.4136	0.4059		2,029.9373

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	0.3597	3.4210	5.0170	9.9100e-003	0.2876	0.0551	0.3427	0.0819	0.0507	0.1326		962.7366	962.7366	7.1400e-003		962.8867
Worker	0.6558	0.8944	9.3208	0.0253	2.1349	0.0167	2.1517	0.5662	0.0155	0.5817		1,972.6196	1,972.6196	0.0998		1,974.7148
Total	1.0155	4.3154	14.3378	0.0352	2.4225	0.0718	2.4943	0.6481	0.0661	0.7142		2,935.3563	2,935.3563	0.1069		2,937.6015

3.4 Building Construction - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373
Total	2.5826	17.3173	13.8357	0.0220		1.0532	1.0532		1.0172	1.0172	0.0000	2,021.4136	2,021.4136	0.4059		2,029.9373

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	0.3597	3.4210	5.0170	9.9100e-003	0.2876	0.0551	0.3427	0.0819	0.0507	0.1326		962.7366	962.7366	7.1400e-003		962.8867
Worker	0.6558	0.8944	9.3208	0.0253	2.1349	0.0167	2.1517	0.5662	0.0155	0.5817		1,972.6196	1,972.6196	0.0998		1,974.7148
Total	1.0155	4.3154	14.3378	0.0352	2.4225	0.0718	2.4943	0.6481	0.0661	0.7142		2,935.3563	2,935.3563	0.1069		2,937.6015

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808		2,008.7495	2,008.7495	0.3850		2,016.8347
Total	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808		2,008.7495	2,008.7495	0.3850		2,016.8347

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	0.3400	3.1542	4.8522	9.8800e-003	0.2876	0.0522	0.3398	0.0819	0.0481	0.1300		943.9399	943.9399	7.0200e-003		944.0872
Worker	0.6030	0.8202	8.5424	0.0253	2.1349	0.0164	2.1514	0.5662	0.0152	0.5814		1,897.5217	1,897.5217	0.0934		1,899.4830
Total	0.9430	3.9744	13.3945	0.0352	2.4225	0.0687	2.4912	0.6481	0.0633	0.7114		2,841.4616	2,841.4616	0.1004		2,843.5702

3.4 Building Construction - 2019

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	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808	0.0000	2,008.7495	2,008.7495	0.3850		2,016.8347
Total	2.2639	15.8827	13.4498	0.0220		0.9117	0.9117		0.8808	0.8808	0.0000	2,008.7495	2,008.7495	0.3850		2,016.8347

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	0.3400	3.1542	4.8522	9.8800e-003	0.2876	0.0522	0.3398	0.0819	0.0481	0.1300		943.9399	943.9399	7.0200e-003		944.0872
Worker	0.6030	0.8202	8.5424	0.0253	2.1349	0.0164	2.1514	0.5662	0.0152	0.5814		1,897.5217	1,897.5217	0.0934		1,899.4830
Total	0.9430	3.9744	13.3945	0.0352	2.4225	0.0687	2.4912	0.6481	0.0633	0.7114		2,841.4616	2,841.4616	0.1004		2,843.5702

3.5 Paving - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335,0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553		1,326.5758	1,326.5758	0.4051		1,335,0833

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	0.0446	0.0609	0.6344	1.7200e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.2621	134.2621	6.7900e-003		134.4047
Total	0.0446	0.0609	0.6344	1.7200e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.2621	134.2621	6.7900e-003		134.4047

3.5 Paving - 2018**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335,0833
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0052	10.3081	8.8698	0.0133		0.6027	0.6027		0.5553	0.5553	0.0000	1,326.5758	1,326.5758	0.4051		1,335,0833

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	0.0446	0.0609	0.6344	1.7200e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.2621	134.2621	6.7900e-003		134.4047
Total	0.0446	0.0609	0.6344	1.7200e-003	0.1453	1.1400e-003	0.1465	0.0385	1.0500e-003	0.0396		134.2621	134.2621	6.7900e-003		134.4047

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	7.9512	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1305	0.1780	1.8544	5.0400e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		392.4584	392.4584	0.0199		392.8752
Total	0.1305	0.1780	1.8544	5.0400e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		392.4584	392.4584	0.0199		392.8752

3.6 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	7.9512	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1305	0.1780	1.8544	5.0400e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		392.4584	392.4584	0.0199		392.8752
Total	0.1305	0.1780	1.8544	5.0400e-003	0.4248	3.3300e-003	0.4281	0.1127	3.0800e-003	0.1157		392.4584	392.4584	0.0199		392.8752

3.6 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	7.9190	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473

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	0.1200	0.1632	1.6995	5.0300e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		377.5174	377.5174	0.0186		377.9076
Total	0.1200	0.1632	1.6995	5.0300e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		377.5174	377.5174	0.0186		377.9076

3.6 Architectural Coating - 2019

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	7.6526					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	7.9190	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473

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	0.1200	0.1632	1.6995	5.0300e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		377.5174	377.5174	0.0186		377.9076
Total	0.1200	0.1632	1.6995	5.0300e-003	0.4248	3.2700e-003	0.4280	0.1127	3.0300e-003	0.1157		377.5174	377.5174	0.0186		377.9076

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.6767	9.1864	40.1715	0.0994	6.8367	0.1401	6.9768	1.8268	0.1293	1.9561		7,692.6228	7,692.6228	0.2909		7,698.7314
Unmitigated	5.1874	13.1077	52.8438	0.1531	10.7166	0.2108	10.9273	2.8635	0.1944	3.0579		11,852.0672	11,852.0672	0.4336		11,861.1729

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,034.54	1,034.54	1,034.54	3,535,180	2,255,293
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	797.41	797.41	797.41	1,517,143	967,872
Total	1,831.95	1,831.95	1,831.95	5,052,323	3,223,165

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510092	0.059583	0.181091	0.139410	0.042694	0.006692	0.016202	0.032692	0.001943	0.002491	0.004392	0.000576	0.002140

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0298	0.2552	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535
NaturalGas Unmitigated	0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3400e-003	402.5418

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	168.51	1.8200e-003	0.0165	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.8247	19.8247	3.8000e-004	3.6000e-004	19.9453
Apartments Mid Rise	3232.4	0.0349	0.2979	0.1268	1.9000e-003		0.0241	0.0241		0.0241	0.0241		380.2822	380.2822	7.2900e-003	6.9700e-003	382.5965
Total		0.0367	0.3144	0.1406	2.0000e-003		0.0253	0.0253		0.0253	0.0253		400.1068	400.1068	7.6700e-003	7.3300e-003	402.5418

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.138525	1.4900e-003	0.0136	0.0114	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003		16.2970	16.2970	3.1000e-004	3.0000e-004	16.3962
Apartments Mid Rise	2.62123	0.0283	0.2416	0.1028	1.5400e-003		0.0195	0.0195		0.0195	0.0195		308.3805	308.3805	5.9100e-003	5.6500e-003	310.2573
Total		0.0298	0.2551	0.1142	1.6200e-003		0.0206	0.0206		0.0206	0.0206		324.6776	324.6776	6.2200e-003	5.9500e-003	326.6535

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008
Unmitigated	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0738					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4392	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789		25.7705	25.7705	0.0253		26.3008
Total	7.3268	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4361					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8139					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4392	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789		25.7705	25.7705	0.0253		26.3008
Total	6.6892	0.1659	14.3535	7.6000e-004		0.0789	0.0789		0.0789	0.0789	0.0000	25.7705	25.7705	0.0253	0.0000	26.3008

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Greenhouse Gas Emission Worksheet

N₂O Mobile Emissions

Olympic Mixed-Use Project

From CalEEMod Vehicle Fleet Mix Output:

Annual VMT: 3,223,165

Vehicle Type	Percent Type ¹	CH ₄ Emission Factor (g/mile) ²	CH ₄ Emission (g/mile) ³	N ₂ O Emission Factor (g/mile) ²	N ₂ O Emission (g/mile) ³
Light Auto	51.0%	0.04	0.0204	0.04	0.0204
Light Truck < 3750 lbs	6.0%	0.05	0.003	0.06	0.0036
Light Truck 3751-5750 lbs	18.1%	0.05	0.00905	0.06	0.01086
Med Truck 5751-8500 lbs	13.9%	0.12	0.01668	0.2	0.0278
Lite-Heavy Truck 8501-10,000 lbs	4.3%	0.12	0.00516	0.2	0.0086
Lite-Heavy Truck 10,001-14,000 lbs	0.7%	0.09	0.00063	0.125	0.000875
Med-Heavy Truck 14,001-33,000 lbs	1.6%	0.06	0.00096	0.05	0.0008
Heavy-Heavy Truck 33,001-60,000 lbs	3.3%	0.06	0.00198	0.05	0.00165
Other Bus	0.2%	0.06	0.00012	0.05	0.0001
Urban Bus	0.2%	0.06	0.00012	0.05	0.0001
Motorcycle	0.4%	0.09	0.00036	0.01	0.00004
School Bus	0.1%	0.06	0.00006	0.05	0.00005
Motor Home	0.2%	0.09	0.00018	0.125	0.00025
Total	100.0%		0.0587		0.075125

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO₂e) Units based on Global Warming Potential (GWP)

CH₄ 21 GWP
N₂O 310 GWP
1 ton (short, US) = 0.90718474 metric ton

Annual Mobile Emissions:

Total Emissions		Total CO ₂ e units	
N ₂ O Emissions:	0.2421 metric tons N ₂ O	75.06	metric tons CO ₂ e
Project Total:		75.06 metric tons CO ₂ e	

References

¹ From CalEEMod results for mobile sources
² From Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile)
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.
³ Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.