

MEMORANDUM

DATE: July 8, 2016

TO: Romi Archer, LSA Environmental Services

FROM: Akshay Newgi, Air Quality Specialist, LSA

SUBJECT: Air Quality and Greenhouse Gas Memorandum for the Orange County Juvenile Hall Multi-Purpose Building Project, City of Orange, California.

LSA Associates, Inc. (LSA) is pleased to submit this air quality and greenhouse gas (GHG) analysis for the construction of the Orange County Juvenile Hall Multipurpose Resource Facility. The project site is located at 331 The City Drive South, Orange, CA 92868.

PROJECT UNDERSTANDING

The proposed project would replace the existing east baseball field with a multipurpose structure, parking, fire department access, and an enclosed (no roof) emergency generator. The multipurpose building will be a 25,000-square foot (sf) building that will include: two classrooms, one multipurpose visitor room, two program rooms, an indoor gymnasium, a fitness center, restrooms, a visitor child play area, sally port, control room, search rooms, a kitchen, staff station, storage rooms, mechanical/electrical/janitor rooms, and a lobby.

Construction is anticipated to last from 14–17 months, out of which 1 month would be for demolition of existing features on-site. Construction is anticipated to begin in April 2017. Construction would utilize an average of 45 construction workers throughout the duration of construction activity. There would be 10 trucks per day used for hauling during the demolition phase, whereas grading would require 2 truck trips per day. A total of 150 concrete trucks would be required to bring concrete to the project site. Four (4) delivery trucks per day are estimated starting from the site preparation phase to the end of construction. Some of the construction equipment utilized would include backhoe and bulldozers to load debris onto dump trucks, earthmovers to spread the import soil, rollers to compact the soil, water trucks to moisten the soil, backhoe to dig foundations, and a crane to joist structural steel and mechanical units.

EXISTING SETTING

The project site is located in the City of Orange, which is part of the South Coast Air Basin (Basin), and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Climate/Meteorology

Air quality in the planning area is affected not only by various emission sources (e.g., mobile, industry) but also by atmospheric conditions such as wind speed, wind direction, temperature, and

rainfall. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the Basin the worst air pollution problem in the nation.

Climate in the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin, which lies in the semipermanent high-pressure zone of the eastern Pacific, resulting in a climate that is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted; however, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Santa Ana Fire Station. The monthly average maximum temperature recorded at this station from 1906 to the present ranged from 68.1°F in January to 84.7°F in August, with an annual average maximum of 75.8°F. The monthly average minimum temperature recorded at this station ranged from 43.1°F in January to 61.6 °F in August, with an annual average minimum of 52 °F. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

Most rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Santa Ana Fire Station monitored precipitation from 1906 to the present, during which average monthly rainfall varied from 0.02 inch in July to 3.05 inches in February, with an annual total of 13.69 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

Although the Basin has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 8- to 12-mile-per-hour (mph) daytime breeze and an offshore 3 to 5 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly (Santa Ana) winds from the mountains and deserts northeast of the Basin. Summer wind flow patterns represent worst-case conditions because this is the period of higher temperatures and more sunlight, which result in ozone (O₃) formation.

Temperature normally decreases with altitude, and a reversal of this atmospheric state, where temperature increases with altitude, is called an inversion. The height from the Earth to the inversion base is known as the mixing height. Persistent low inversions and cool coastal air tend to create morning fog and low stratus clouds. Cloudy days are less likely in the eastern portions of the Basin and are about 25 percent more likely along the coast. The vertical dispersion of air pollutants in the Basin is limited by temperature inversions in the atmosphere close to the Earth's surface.

Inversions are generally lower in the nighttime when the ground is cool than during daylight hours when the sun warms the ground and, in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base, causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and

opens up to allow the surface air layers to mix upward. This can be seen in the middle to late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive contaminant buildup.

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

Local Air Quality

The SCAQMD, together with the California Air Resources Board (ARB), maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the project site is the Anaheim Pampas Station on Pampas Lane. This station is approximately 4.5 miles (mi) northwest of the project site, and its air quality trends are representative of the ambient air quality in the project area. The pollutants monitored at this station are CO, O₃, nitrogen dioxide (NO₂), particulate matter less than 10 or 2.5 microns in size (PM₁₀ and PM_{2.5}, respectively), and sulfur dioxide (SO₂). The ambient air quality data monitored at this station within the past 3 years are listed in Table A.

In Table A, the ambient air quality data show that CO, NO₂ and SO₂ levels are consistently below the relevant State and federal standards. The State and federal 8-hour O₃ standards were exceeded 12 days in the last 3 years, and the State 1-hour O₃ standard was exceeded 3 days over the last 3 years. The State standard for PM₁₀ was exceeded 5 days over the last 3 years, whereas the federal standard for PM_{2.5} was exceeded 8 days over the last 3 years.

Air Pollution Constituents and Attainment Status

The ARB coordinates and oversees both State and federal air pollution control programs in the State. The ARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the United States Environmental Protection Agency (EPA) and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the ambient air quality standards (AAQS).

Attainment areas may be:

- Attainment/unclassified (“unclassifiable” in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status;

Table A: Ambient Air Quality in the Project Vicinity

Pollutant	Standard	2013	2014	2015
Carbon Monoxide (CO) – Anaheim at 1630 W Pampas Lane				
Maximum 1-hour concentration (ppm)		3.4	3.1	3.1
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		2.6	2.1	2.2
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Ozone (O₃) – Anaheim at 1630 W Pampas Lane				
Maximum 1-hour concentration (ppm)		0.084	0.111	0.100
Number of days exceeded:	State: > 0.09 ppm	0	2	1
Maximum 8-hour concentration (ppm)		0.070	0.082	0.079
Number of days exceeded:	State: > 0.07 ppm	0	6	1
	Federal: > 0.07 ppm	0	4	1
Coarse Particulates (PM₁₀) – Anaheim at 1630 W Pampas Lane				
Maximum 24-hour concentration (µg/m ³)		77	85	59
Number of days exceeded:	State: > 50 µg/m ³	1	2	2
	Federal: > 150 µg/m ³	0	0	0
Annual arithmetic average concentration (µg/m ³)		25	27	27
Exceeded for the year:	State: > 20 µg/m ³	Yes	Yes	Yes
Fine Particulates (PM_{2.5}) – Anaheim at 1630 W Pampas Lane				
Maximum 24-hour concentration (µg/m ³)		48	47	54
Number of days exceeded:	Federal: > 35 µg/m ³	1	4	3
Annual arithmetic average concentration (µg/m ³)		10.1	16.1	14.8
Exceeded for the year:	State: > 12 µg/m ³	No	Yes	Yes
	Federal: > 15 µg/m ³	No	Yes	No
Nitrogen Dioxide (NO₂) – Anaheim at 1630 W Pampas Lane				
Maximum 1-hour concentration (ppm)		81.5	75.8	59.2
Number of days exceeded:	State: > 0.18 ppm	0	0	0
	Federal: > 0.10 ppm	0	0	0
Annual arithmetic average concentration (ppm)		NA	NA	0.014
Exceeded for the year:	State: > 0.030 ppm	NA	NA	No
	Federal: > 0.053 ppm	NA	NA	No
Sulfur Dioxide (SO₂) – Anaheim at 1630 W Pampas Lane				
Maximum 24-hour concentration (ppm)		0.0012	0.0014	0.0011
Number of days exceeded:	State: > 0.04 ppm	0	0	0
Maximum 1-hour concentration (ppm)		0.0041	0.0088	0.0045
Number of days exceeded:	State: > 0.25 ppm	0	0	0
	Federal: > 0.075 ppm	0	0	0

Source 1: United States Environmental Protection Agency. AirData Air Quality Monitors. Website: http://www.epa.gov/airdata/ad_maps.html, accessed June 2016.

Source 2: California Air Resources Board. iADAM: Air Quality Data Statistics. Website: <http://www.arb.ca.gov/adam>, accessed June 2016.

µg/m³ = micrograms per cubic meter

NA = Not Available

ppm = parts per million

- Attainment/maintenance (national ambient air quality standards [NAAQS] only), which violated an NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially redesignated as attainment by the EPA with a maintenance State Implementation Plan (SIP); or

- Attainment (usually only for California ambient air quality standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table B lists the attainment status for the criteria pollutants in the Basin.

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

Pollutant	State	Federal
O ₃ 1-hour	Nonattainment	No Federal Standard
O ₃ 8-hour	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Moderate Nonattainment
CO	Attainment	Unclassified/Attainment
NO ₂	Attainment	Unclassified/Attainment
SO ₂	Attainment	Attainment
Lead	Attainment ¹	Unclassified/Attainment ¹
All others	Attainment/Unclassified	No Federal Standard

Source: California Air Resources Board. Air Quality Standards and Area Designations. Website: <http://www.arb.ca.gov/desig/desig.htm>, accessed June 2016.

¹ Except in Los Angeles County.

CO = carbon monoxide PM₁₀ = particulate matter less than 10 microns in size
 NO₂ = nitrogen dioxide PM_{2.5} = particulate matter less than 2.5 microns in size
 O₃ = ozone SO₂ = sulfur dioxide

THRESHOLDS OF SIGNIFICANCE

Thresholds for Construction and Operational Emissions that have Regional Effects

Table C shows the California Environmental Quality Act (CEQA) significance thresholds that have been established for the Basin. Projects in the Basin with construction- or operations-related emissions that exceed any of the emission thresholds should be considered significant under CEQA.

Thresholds for Localized Significance

The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors from emissions of CO, NO_x, PM₁₀, and PM_{2.5}. Localized significance thresholds (LSTs) represent the maximum emissions from a project site that are not expected to result in an exceedance of the NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the project's Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is Central Orange County (Area 17). Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. The closest sensitive receptors are the homes on the south at Orangewood Children's Home, approximately 50 feet (ft) south of the project site.

Table C: SCAQMD Significance Thresholds

Air Pollutant	Construction
VOCs	75 lbs/day
CO	550 lbs/day
NO _x	100 lbs/day
SO _x	150 lbs/day
PM ₁₀	150 lbs/day
PM _{2.5}	55 lbs/day

Source: SCAQMD Air Quality Significance Thresholds (SCAQMD 2015).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

In the cases of CO and NO₂, since ambient levels are below the CAAQS, as shown in Table A, the project would be considered to have a significant impact if project emissions result in a concentration at a significant receptor that exceeds the CAAQS. Even though the ambient levels of PM₁₀ and PM_{2.5} shown in Table A are less than the CAAQS and NAAQS, and since both are nonattainment pollutants, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rule 403 (SCAQMD 2005) and Rule 1301 (SCAQMD 1995). The Rule 403 threshold of 10.4 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) applies to construction emissions. The Rule 1301 threshold of 2.5 $\mu\text{g}/\text{m}^3$ applies to operational activities.

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD performed air dispersion modeling for a range of construction sites less than or equal to 5 acres (ac) in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant.

Construction LST emission thresholds for a 1 ac site at 82 ft (25 meters [m]) are applicable to the project. Therefore, the following LST emission thresholds would apply during project construction.

- 81 pounds per day (lbs/day) of NO_x
- 485 lbs/day of CO
- 4 lbs/day of PM₁₀
- 3 lbs/day of PM_{2.5}

AIR QUALITY IMPACT ANALYSIS

Short-Term (Construction) Emissions

Emissions of pollutants would occur during construction of the proposed project from soil disturbance and equipment exhaust. Major sources of emissions during demolition and construction include: (1) exhaust emissions from construction equipment and vehicles; and (2) fugitive dust generated by demolition activities, construction vehicles, and equipment traveling over exposed surfaces.

Peak daily emissions associated with the on-site construction equipment, on-road haul trucks and vendor trips, and fugitive dust emissions during each of the construction tasks were calculated using California Emission Estimator Model (CalEEMod) Version 2013.2.2. The total peak-day construction emissions are summarized in Table D and detailed in the attachment to this memo. The emissions listed in Table D represent the maximum daily emissions generated during each phase of construction.

Table D: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOCs	NO _x	CO	SO ₂	Fugitive PM ₁₀	Exhaust PM ₁₀	Fugitive PM _{2.5}	Exhaust PM _{2.5}
Demolition	1.5	11	13	0.025	1.1	0.74	0.28	0.7
Site Preparation	1.6	14	13	0.023	1.1	0.79	0.28	0.72
Grading	1.6	12	14	0.026	1.4	0.74	0.44	0.71
Building Construction	1.9	16	16	0.03	1.2	0.9	0.32	0.83
Architectural Coatings	9.4	3	6.7	0.017	1.1	0.17	0.28	0.17
Paving	1.3	9.6	12	0.025	1.1	0.52	0.28	0.48
Peak Daily	11	19	23	0.047	3.4		1.6	
SCAQMD Thresholds	75	100	550	150	150		55	
Significant Emissions?	No	No	No	No	No		No	

Source: Compiled by LSA Associates, Inc. (June 2016).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO₂ = sulfur dioxide

VOCs = volatile organic compounds

Since on-site construction operations must comply with dust control and other measures prescribed by SCAQMD Rules 402 and 403, compliance with these rules is assumed in Table D. Table D shows that construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD established daily emissions thresholds; therefore, no mitigation is required.

Fugitive Dust

Blowing dust, combined with engine emissions, produces airborne matter referred to in air quality studies as fugitive dust, which includes larger dust particles as well as PM₁₀ and PM_{2.5}. Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Once construction activities are complete, no further fugitive dust emissions occur. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Any nearby sensitive receptors and on-site workers may be

exposed to blowing dust, depending on the prevailing wind conditions. Fugitive dust would also be generated as construction equipment or trucks travel on unpaved areas of the construction site. The PM₁₀ and PM_{2.5} portions of the fugitive dust emissions are included in Table D. As indicated in Table D, compliance with SCAQMD Rules 402 and 403 would ensure that fugitive dust (PM₁₀ and PM_{2.5}) generation would be less than significant.

Localized Significance

The SCAQMD has issued guidance on applying CalEEMod modeling results to LST analyses.¹ Table E shows the results of applying this guidance to the CalEEMod results listed in Table D and shows the construction-related emissions of CO, NO_x, PM₁₀, and PM_{2.5} compared to the LSTs.

Table E: Summary of On-Site Construction Emissions, Localized Significance

Construction	Emission Rates (lbs/day)			
	NO _x	CO	PM ₁₀ ¹	PM _{2.5} ¹
On-Site Emissions	13	8.6	1.02	0.85
Localized Significance Threshold	81	485	4	3
Exceed Significance?	No	No	No	No

Source: Compiled by LSA Associates, Inc. (June 2016).

¹ Total PM₁₀ and PM_{2.5} daily emissions with fugitive dust mitigation measures implemented.

CO = carbon monoxide

PM₁₀ = particulate matter less than 10 microns in size

lbs/day = pounds per day

PM_{2.5} = particulate matter less than 2.5 microns in size

NO_x = nitrogen oxides

Table E shows that the calculated emissions rates for the proposed on-site construction activities are below the LSTs for CO, NO_x, PM₁₀, and PM_{2.5} at the nearest sensitive receptor location, the Orangewood Children's Home, which is approximately 50 ft south of the project site. Therefore, the proposed project would not cause any short-term localized air quality impacts, and no mitigation is required.

Odors

Odor complaints are most commonly associated with agricultural land uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, and landfills, etc. Objectionable odors may be emitted during the operation of diesel-fueled equipment during construction of the proposed project. However, these odors would be limited to the project site during construction and would disperse quickly. Therefore, these odors are not considered a significant impact.

¹ South Coast Air Quality Management District. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf>, accessed June 2016.

Long-Term (Operational) Emissions

Long-term air emission impacts are associated with any change in permanent use of the project site by on-site stationary and off-site mobile sources that substantially increase emissions. The project consists of the demolition of existing features on-site and construction of a new multi-purpose resource facility. Once the demolition and construction operations are completed, there will be no new operational emissions from the project. Operations from the existing facility will be transferred to the new proposed facility and no new trips would be generated. The proposed facility would be more energy efficient than the existing one, thereby leading to lower air quality emissions from operations.

Air Quality Management Plan Consistency

One measure of determining if the project is consistent with the air quality plans is if the project will not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards of the interim emission reductions specified in the air quality plans.

The main purpose of an air quality plan is to bring an area into compliance with the requirements of the federal and State air quality standards. Such plans describe the air pollution control strategies to be implemented by a city, county, or region. The most recent SCAQMD plan for attaining CAAQS, the 2012 Final Air Quality Management Plan (AQMP) (SCAQMD 2013), was approved by SCAQMD's Governing Board on December 7, 2012.

Because of the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10} , if project-generated emissions of either of the ozone precursor pollutants (i.e., reactive organic gases [ROGs] and NO_x), $PM_{2.5}$, or PM_{10} would exceed the SCAQMD significance thresholds, then the project would be considered in conflict with the attainment plans. As supported in the analysis above, the proposed project would not result in significant air quality impacts. Therefore, no significant impact would occur regarding the project's consistency with the City of Orange General Plan (2010) or the AQMP, and no mitigation measures are required.

STANDARD CONDITIONS

SCAQMD Rules

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

- **SCAQMD Rule 403 Measures**

- Water active sites at least twice daily (locations where grading is to occur will be thoroughly watered prior to earthmoving).
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 ft of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).
- Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.

- **SCAQMD CEQA Handbook**

- Dust suppression measures
 - Revegetate disturbed areas as quickly as possible.
 - All streets shall be swept once per day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
 - Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site each trip.
 - All on-site roads shall be paved as soon as feasible, watered periodically, or chemically stabilized.
 - The area disturbed by clearing, grading, earthmoving, or excavation operations shall be minimized at all times.
- The construction contractor shall select the construction equipment used on site based on low-emission factors and high-energy efficiency. The construction contractor shall ensure that construction-grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturers' specifications.
- The construction contractor shall utilize electric or diesel-powered equipment in lieu of gasoline-powered engines where feasible.
- The construction contractor shall ensure that construction plans include a statement that work crews will shut off equipment when not in use. During smog season (May through October), the overall length of the construction period will be extended, thereby decreasing the size of the area prepared each day, to minimize vehicles and equipment operating at the same time.
- The construction contractor shall time the construction activities so as to not interfere with peak-hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flagperson shall be retained to maintain safety adjacent to existing roadways.
- The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew.

GREENHOUSE GAS EMISSIONS

Methodology and Thresholds

Section 15064.4 of the State CEQA Guidelines discusses the significance evaluation for GHG emissions. Section 15064.4(a) recognizes that the “determination of the significance calls for a careful

judgment” by the lead agency that is coupled with *lead agency discretion* to determine whether to (1) use a model or methodology and/or (2) rely on a qualitative analysis or performance-based thresholds. Section 15064.4(b) further states that a lead agency should consider the following, non-exclusive list of factors when assessing the significance of GHG emissions:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. The extent to which project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

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

The SCAQMD has also issued recommendations regarding the methodology to be used to analyze GHG impacts in environmental documents prepared pursuant to CEQA. In December 2008, SCAQMD proposed a tiered approach to project analysis¹. According to that tiered approach, if a project is exempt from CEQA, Tier 1 would be the most appropriate tier, the project effects related to GHG emissions/global climate change (GCC) would be less than significant, and the analysis would be complete. If the project is not exempt and there is a local GHG reduction plan in place, then Tier 2 would be the most appropriate tier. If the project is consistent with that plan, then the project effects related to GHG emissions/GCC would be less than significant, and the analysis would be complete. If the project is not consistent with the plan, then the project would have a significant impact related to GHG emissions/GCC, and the analysis would be complete. If there is no local GHG reduction plan, Tier 3 is used to screen smaller projects. Both the SCAQMD and ARB screening thresholds categorize projects into two categories: “industrial” and “commercial/residential.” If the project emissions are less than the applicable numerical threshold, then the project effects related to GHG emissions/GCC would be less than significant, and the analysis would be complete. The applicable threshold for this project would be 3,000 MT CO₂e/yr for commercial projects. If the project exceeds 3,000 MT CO₂e/yr, then the project should be analyzed using Tier 4.

If the project emissions would meet the applicable Tier 4 16 percent reduction goal (based on the project’s consistency with California’s goals to reduce GHG emissions under Assembly Bill [AB] 32), then the project would have less than significant impacts related to GHG emissions/GCC, and the analysis would be complete. If the project exceeds both the Tier 3 and Tier 4 thresholds, then the project would have a significant impact related to GHG emissions/GCC and the analysis would be complete.

Tier 5 is not a threshold, but rather specifies that a project include all feasible on- and off-site measures to reduce GHG emissions, as well as financially support independent projects that have a net reduction in GHG emissions.

The proposed project is non-exempt from CEQA, and a local GHG reduction plan is not currently in place. Therefore, from the potential project GHG emissions would be compared against the SCAQMD screening threshold of 3,000 MT CO₂e/yr for commercial projects.

¹ South Coast Air Quality Management District, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Website: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2), accessed June 2016.

Environmental Setting

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

“Global climate change” refers to any change in measures of weather (e.g., temperature, precipitation, or wind) lasting for an extended period of time (decades or longer). GCC may result from natural factors (e.g., changes in the sun’s intensity), natural processes within the climate system (e.g., changes in ocean circulation), or human activities (e.g., the burning of fossil fuels, land clearing, or agriculture). The primary observed effect of GCC has been a rise in the average global tropospheric¹ temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, and changes in wind patterns or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California’s coastline, and seawater intrusion in the Sacramento Delta.

Global surface temperatures have risen by 1.33°F ±0.32°F over the last 100 years (1906–2005). The rate of warming over the last 50 years is almost double that over the last 100 years². Latest projections, based on state-of-the-art climate models, indicate that temperatures in California are expected to rise 3–10.5°F by the end of the century³. The prevailing scientific opinion on GCC is that “most of the warming observed over the last 60 years is attributable to human activities” (IPCC 2013). Increased amounts of carbon dioxide (CO₂) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.⁴

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

² Intergovernmental Panel on Climate Change. Climate Change 2013: The physical Science Basis. Website: <https://www.ipcc.ch/report/ar5/wg1/>, accessed June 2016.

³ California Climate Change Center. Climate Scenarios for California, Website: <http://www.energy.ca.gov/2005publications/CEC-500-2005-203/CEC-500-2005-203-SF.PDF>, accessed June 2016.

⁴ The temperature on Earth is regulated by a system commonly known as the “greenhouse effect.” Just as the glass in a greenhouse allows heat from sunlight in and reduces the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; therefore, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

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

- CO₂
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF₆)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While GHGs produced by human activities include naturally occurring GHGs (e.g., CO₂, CH₄, and N₂O), some gases (e.g., HFCs, PFCs, and SF₆) are completely new to the atmosphere. Certain other gases (e.g., water vapor) are short-lived in the atmosphere as compared to the GHGs that remain in the atmosphere for significant periods of time, thereby contributing to GCC in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this GCC evaluation, the term “GHGs” will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of global warming potential, which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The global warming potential of each gas is measured relative to CO₂, the most abundant GHG. The definition of global warming potential for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e). Table F shows the global warming potential for each type of GHG. For example, SF₆ is 23,900 times more potent at contributing to global warming than CO₂.

Primary Greenhouse Gases. The following discussion summarizes the characteristics of the six primary GHGs are described below.

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

Table F: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO ₂)	50–200	1 (Least GWP)
Methane (CH ₄)	12 ±3	21
Nitrous Oxide (N ₂ O)	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoromethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900 (Greatest GWP)

Source: *First Update to the Climate Change Scoping Plan: Building on the Framework* (ARB 2014).

HFC = hydrofluorocarbon

PFC = perfluorocarbon

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO₂ are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO₂ to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-dwelling plant species) cannot keep pace with this extra input of human-made CO₂; consequently, the gas is building up in the atmosphere. The concentration of CO₂ in the atmosphere has risen approximately 30 percent since the late 1800s.¹

In 2002, CO₂ emissions from fossil fuel combustion accounted for approximately 98 percent of human-made CO₂ emissions and approximately 84 percent of California's overall GHG emissions (CO₂e). The transportation sector accounted for California's largest portion of CO₂ emissions, with gasoline consumption making up the greatest portion of these emissions. Electricity generation was California's second-largest category of GHG emissions.²

Methane. CH₄ is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (burning of coal, oil, and natural gas, etc.). Decomposition occurring in landfills accounts for the majority of human-generated CH₄ emissions in California, followed by enteric

¹ California Climate Change. Climate Action Team Reports. Website: http://www.climatechange.ca.gov/climate_action_team/reports/, accessed June 2016.

² California Air Pollution Control Officers Association. Model Policies for Greenhouse Gases in General Plans, Website: <http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-ModelPolicies-6-12-09-915am.pdf>, accessed June 2016.

fermentation (emissions from the digestive processes of livestock).¹ Agricultural processes such as manure management and rice cultivation are also substantial sources of human-made CH₄ in California. CH₄ accounted for approximately 8 percent of gross climate change emissions (CO₂e) in California in 2012.² It is estimated that over 60 percent of global methane emissions are related to human-related activities (IPCC 2013). As with CO₂, the major removal process of atmospheric CH₄—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH₄ concentrations in the atmosphere are increasing.

Nitrous Oxide. N₂O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California. N₂O emissions accounted for nearly 7 percent of human-made GHG emissions (CO₂e) in California in 2002.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone (O₃) depleting substances regulated under the Montreal Protocol.³ PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry, which is active in California, leads to greater use of PFCs. Total HFCs, PFCs, and SF₆ accounted for approximately 3.5 percent of human-made GHG emissions (CO₂e) in California in 2002.⁴

As shown in Table 2.7 A, carbon dioxide (CO₂) has a GWP of 1, regardless of the time period used, because it is the gas used as a reference. Methane (CH₄) is estimated to have a GWP of 28-36 over 100 years, while Nitrous Oxide (N₂O) has a GWP 265-298 times that of CO₂ for a 100-year timescale. N₂O emitted today remains in the atmosphere for more than 100 years, on average. Chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) are sometimes called high-GWP gases because, for a given amount of mass, they trap substantially more heat than CO₂. (The GWPs for these gases can be in the thousands or tens of thousands.)⁵

¹ California Air Resources Board. California Greenhouse Gas Emission Inventory – 2016 Edition. Website: <http://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed June 2016.

²

³ The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

⁴ California Climate Change. Climate Action Team Reports. Website: http://www.climatechange.ca.gov/climate_action_team/reports/, accessed June 2016.

⁵ United States Environmental Protection Agency. Understanding Global Warming Potentials, Website: <https://www3.epa.gov/climatechange/ghgemissions/gwps.html>, accessed July 2016.

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

Global Emissions. Worldwide emissions of GHGs in 2010 totaled 46 billion metric tons of CO₂e per year (MT CO₂e/yr)¹. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2014, the United States emitted approximately 6.9 billion MT CO₂e, down from 7.3 billion MT CO₂e in 2007². Of the six major sectors nationwide—electric power industry, transportation, industry, agriculture, commercial, and residential—the electric power industry and transportation sectors combined account for approximately 70 percent of the GHG emissions; the majority of the electric power industry and all of the transportation emissions are generated from direct fossil fuel combustion. In 2013, the total United States GHG emissions were approximately 9.0 percent less than 2005 levels.³

State of California Emissions. According to ARB emission inventory estimates, the State emitted approximately 442 million metric tons of CO₂e (MMT CO₂e) emissions in 2014⁴. This is a decrease of 1.5 MMT CO₂e from 2012 and a 7 percent decrease since 2004 (ARB 2015).

The ARB estimates that transportation was the source of approximately 37 percent of the State's GHG emissions in 2013, followed by electricity generation (both in-State and out-of-State) at 20 percent and industrial sources at 20 percent. The remaining sources of GHG emissions were residential and commercial activities at 9 percent, agriculture at 8 percent, high global warming potential gases at 4 percent, and recycling and waste at 2 percent (ARB 2015).

The ARB is responsible for developing the State GHG Emission Inventory. This inventory estimates the amount of GHGs emitted to and removed from the atmosphere by human activities within the State and supports the AB 32 Climate Change Program. The ARB's current GHG emission inventory

¹ United States Environmental Protection Agency. Climate Change Indicators in the United States: Global Greenhouse Gas Emissions, Website: https://www3.epa.gov/climatechange/pdfs/print_global-ghg-emissions-2014.pdf, accessed July 2016.

² United States Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014, Website: <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>

³ United States Environmental Protection Agency. U.S. Greenhouse Gas Inventory Report: 1990-2014. Website: <http://www.epa.gov/climatechange/emissions/usinventoryreport.html>, accessed June 2016.

⁴ California Air Resources Board. California Greenhouse Gas Emission Inventory – 2016 Edition, Website: <http://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed July 2016.

covers the years 1990–2013 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, agricultural lands).

The ARB staff have projected statewide unregulated GHG emissions for 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, at 509 MMT CO₂e. GHG emissions from the transportation and electricity sectors as a whole are expected to increase but remain at approximately 30 percent and 32 percent of total CO₂e emissions, respectively (ARB 2014).

Regional Emissions. Existing GHG emissions for the Southern California Association of Governments (SCAG) region were calculated for construction sources, mobile sources, natural gas consumption, and electricity generation. GHG emissions for 2009 were estimated to be approximately 176.79 MMT CO₂e¹. Transportation and energy (i.e., electricity use and natural gas consumption) accounted for approximately 47 and 52 percent of emissions, respectively. Construction activity accounted for approximately 1 percent of the GHG emissions.

Applicable GHG Regulation – California Assembly Bill 32 (AB32)

The California Global Warming Solutions Act of 2006, created a first-in-the-country comprehensive program to achieve real, quantifiable, and cost-effective reductions in GHGs. The law set an economy-wide cap on the State’s GHG emissions at 1990 levels by 2020. It directed the ARB to prepare, approve, and implement a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions. Executive Order (EO) S-20-06, signed in October 2006, directed the Secretary for Environmental Protection to establish a Market Advisory Committee of national and international experts. The committee made recommendations to the ARB on the design of a market-based program for GHG emissions reduction. The ARB adopted the first Scoping Plan, describing a portfolio of measures to achieve the target, in December 2008. All of the major regulatory measures necessary for meeting the 2020 emissions target were adopted by December 2010.

The ARB approved the First Update to the Climate Change Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California’s climate change strategy. It shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, with a goal of 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California’s climate change priorities and activities Climate for the next several years. The Update does not set new targets for the State but rather describes a path that would achieve the long-term 2050 goal of EO S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.²

¹ Southern California Association of Governments. Draft 2008 RTP PEIR, Website: http://rtpscs.scag.ca.gov/Documents/peir/2008/draft/Ch3-02_AirQuality.pdf, accessed July 2016.

² California Air Resources Board. Assembly Bill 32 Overview, Website: <http://www.arb.ca.gov/cc/ab32/ab32.htm>, accessed July 2016.

Impact Significance Criteria

The *State CEQA Guidelines* leave the determination of significance to the reasonable discretion of the lead agency and encourage lead agencies to develop and publish thresholds of significance for use in determining the significance of environmental effects in CEQA documents. Neither the SCAQMD nor the City has yet established specific quantitative significance thresholds for GHG emissions for construction-only projects. Until more guidance is provided from federal or State agencies, the more conservative SCAQMD screening significance criteria level of 3,000 MT CO₂e/yr will be used for the proposed project. However, given the frequency of changes in regulations over GHG emissions, this standard should be recognized as interim and will likely change over time as further guidance is provided by federal or State regulatory agencies.

Impact Analysis

Construction GHG Emissions. During construction of the proposed project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Table G lists the annual GHG emissions from project construction.

Table G: Construction Greenhouse Gas Emissions

Construction Phase		Total Regional Pollutant Emissions (MT/yr)			
		CO ₂	CH ₄	N ₂ O	CO ₂ e
2017	Demolition	22	0.0028	0	22
	Site Preparation	9.4	0.0015	0	9.4
2017	Grading	73	0.0089	0	73
	Building Construction	100	0.015	0	110
2018	Building Construction	180	0.027	0	180
	Architectural Coating	14	0.00069	0	14
	Paving	19	0.0031	0	19
Total Construction Emissions		420	0.059	0	430
Amortized over 30 years		14	0.002	0	14

Source: CalEEMod Version 2013.2.2 modeling results (June 2016).

CH₄ = methane

MT/yr = metric tons per year

CO₂ = carbon dioxide

N₂O = nitrous oxide

CO₂e = carbon dioxide equivalent

Per the SCAQMD guidance¹, due to the long-term nature of the GHGs in the atmosphere, instead of determining significance of construction emissions alone, the total construction emissions are amortized over 30 years (an estimate of the life of the project), added to the operational emissions, and compared to the applicable GHG significance threshold.

¹ South Coast Air Quality Management District, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Website: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2), accessed June 2016.

Operational GHG Emissions. The project consists of the demolition of existing features on-site and construction of a Multipurpose Rehabilitation Center. Once the demolition and construction are complete, there will be no new operational emissions from the project. No new trips would be generated to or from the project site. The equivalent annual GHG emissions from the project would be 14 MT CO₂e/yr.

Therefore, equivalent annual GHG emissions would be below the screening threshold of 3,000 MT CO₂e/yr for commercial projects, and GHG emissions would be considered to have a less than significant impact. The proposed project would not impede or interfere with achieving the State's emission reduction objectives in AB 32 (and EO S-03-05). Therefore, no mitigation is required.

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Attachment: CalEEMod Modeling Runs

**OC Juvenile Hall
Orange County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.66	1000sqft	0.08	3,660.00	0
Other Non-Asphalt Surfaces	4.67	1000sqft	0.11	4,670.00	0
Other Non-Asphalt Surfaces	7.13	1000sqft	0.16	7,125.00	0
Health Club	26.27	1000sqft	0.60	26,274.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information received from client

Construction Phase - Construction schedule adjusted to match information received from client

Trips and VMT - Information received from client: 5 trucks/day for demolition. Assuming 15 CY truck, 56 trucks for soil import of 835 CY over grading duration, i.e. 2 truck trips/day

Demolition - 2000 square feet of asphalt and 1500 square feet of concrete

Grading - Infor received - 835 cubic yards of soil import

Architectural Coating - Rule 1113, Info received from client: 19,500 sf. to receive AC.

Construction Off-road Equipment Mitigation - Rule 403

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
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	70.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	PhaseEndDate	8/23/2018	7/24/2018
tblConstructionPhase	PhaseStartDate	7/25/2018	6/25/2018
tblGrading	AcresOfGrading	5.00	0.50
tblGrading	MaterialImported	0.00	835.00
tblLandUse	LandUseSquareFeet	7,130.00	7,125.00
tblLandUse	LandUseSquareFeet	26,270.00	26,274.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	16.00	10.00
tblTripsAndVMT	HaulingTripNumber	104.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	7.00	32.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	5.00	90.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00
tblTripsAndVMT	WorkerTripNumber	4.00	90.00

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	0.1992	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003
Energy	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	99.8143	99.8143	3.7700e-003	1.2200e-003	100.2708
Mobile	0.3677	0.7463	3.4906	8.9600e-003	0.6436	0.0100	0.6536	0.1720	9.2300e-003	0.1812	0.0000	662.2096	662.2096	0.0257	0.0000	662.7492
Waste						0.0000	0.0000		0.0000	0.0000	30.3959	0.0000	30.3959	1.7963	0.0000	68.1191
Water						0.0000	0.0000		0.0000	0.0000	0.4929	8.8169	9.3098	0.0510	1.2800e-003	10.7780
Total	0.5700	0.7742	3.5145	9.1300e-003	0.6436	0.0121	0.6557	0.1720	0.0114	0.1833	30.8888	770.8418	801.7305	1.8768	2.5000e-003	841.9183

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/15/2017	5/16/2017	5	22	
2	Site Preparation	Site Preparation	5/17/2017	5/30/2017	5	10	
3	Grading	Grading	5/31/2017	9/5/2017	5	70	
4	Building Construction	Building Construction	9/6/2017	7/24/2018	5	230	
5	Architectural Coating	Architectural Coating	6/25/2018	7/24/2018	5	22	
6	Paving	Paving	7/25/2018	8/21/2018	5	20	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 62,594; Non-Residential Outdoor: 20,865 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	90.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	90.00	8.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7200e-003	0.0000	1.7200e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1152	0.0944	1.3000e-004		7.9900e-003	7.9900e-003		7.6200e-003	7.6200e-003	0.0000	11.8133	11.8133	2.3300e-003	0.0000	11.8622
Total	0.0133	0.1152	0.0944	1.3000e-004	1.7200e-003	7.9900e-003	9.7100e-003	2.6000e-004	7.6200e-003	7.8800e-003	0.0000	11.8133	11.8133	2.3300e-003	0.0000	11.8622

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	1.3300e-003	1.0700e-003	0.0000	9.0000e-005	2.0000e-005	1.0000e-004	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.3304	0.3304	0.0000	0.0000	0.3304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0700e-003	4.5500e-003	0.0476	1.3000e-004	0.0109	8.0000e-005	0.0109	2.8900e-003	7.0000e-005	2.9600e-003	0.0000	9.4171	9.4171	4.4000e-004	0.0000	9.4264
Total	3.1600e-003	5.8800e-003	0.0486	1.3000e-004	0.0110	1.0000e-004	0.0110	2.9100e-003	9.0000e-005	3.0000e-003	0.0000	9.7475	9.7475	4.4000e-004	0.0000	9.7569

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					6.7000e-004	0.0000	6.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1152	0.0944	1.3000e-004		7.9900e-003	7.9900e-003		7.6200e-003	7.6200e-003	0.0000	11.8133	11.8133	2.3300e-003	0.0000	11.8622
Total	0.0133	0.1152	0.0944	1.3000e-004	6.7000e-004	7.9900e-003	8.6600e-003	1.0000e-004	7.6200e-003	7.7200e-003	0.0000	11.8133	11.8133	2.3300e-003	0.0000	11.8622

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	1.3300e-003	1.0700e-003	0.0000	9.0000e-005	2.0000e-005	1.0000e-004	2.0000e-005	2.0000e-005	4.0000e-005	0.0000	0.3304	0.3304	0.0000	0.0000	0.3304
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0700e-003	4.5500e-003	0.0476	1.3000e-004	0.0109	8.0000e-005	0.0109	2.8900e-003	7.0000e-005	2.9600e-003	0.0000	9.4171	9.4171	4.4000e-004	0.0000	9.4264
Total	3.1600e-003	5.8800e-003	0.0486	1.3000e-004	0.0110	1.0000e-004	0.0110	2.9100e-003	9.0000e-005	3.0000e-003	0.0000	9.7475	9.7475	4.4000e-004	0.0000	9.7569

3.3 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3500e-003	0.0634	0.0362	5.0000e-005		3.8500e-003	3.8500e-003		3.5400e-003	3.5400e-003	0.0000	4.3357	4.3357	1.3300e-003	0.0000	4.3636
Total	6.3500e-003	0.0634	0.0362	5.0000e-005	2.7000e-004	3.8500e-003	4.1200e-003	3.0000e-005	3.5400e-003	3.5700e-003	0.0000	4.3357	4.3357	1.3300e-003	0.0000	4.3636

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	3.2800e-003	4.4600e-003	1.0000e-005	2.5000e-004	5.0000e-005	3.0000e-004	7.0000e-005	5.0000e-005	1.2000e-004	0.0000	0.7714	0.7714	1.0000e-005	0.0000	0.7715
Worker	1.4000e-003	2.0700e-003	0.0216	6.0000e-005	4.9400e-003	3.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.2805	4.2805	2.0000e-004	0.0000	4.2847
Total	1.7400e-003	5.3500e-003	0.0261	7.0000e-005	5.1900e-003	8.0000e-005	5.2700e-003	1.3800e-003	8.0000e-005	1.4600e-003	0.0000	5.0519	5.0519	2.1000e-004	0.0000	5.0562

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3500e-003	0.0634	0.0362	5.0000e-005		3.8500e-003	3.8500e-003		3.5400e-003	3.5400e-003	0.0000	4.3357	4.3357	1.3300e-003	0.0000	4.3636
Total	6.3500e-003	0.0634	0.0362	5.0000e-005	1.0000e-004	3.8500e-003	3.9500e-003	1.0000e-005	3.5400e-003	3.5500e-003	0.0000	4.3357	4.3357	1.3300e-003	0.0000	4.3636

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.4000e-004	3.2800e-003	4.4600e-003	1.0000e-005	2.5000e-004	5.0000e-005	3.0000e-004	7.0000e-005	5.0000e-005	1.2000e-004	0.0000	0.7714	0.7714	1.0000e-005	0.0000	0.7715
Worker	1.4000e-003	2.0700e-003	0.0216	6.0000e-005	4.9400e-003	3.0000e-005	4.9700e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.2805	4.2805	2.0000e-004	0.0000	4.2847
Total	1.7400e-003	5.3500e-003	0.0261	7.0000e-005	5.1900e-003	8.0000e-005	5.2700e-003	1.3800e-003	8.0000e-005	1.4600e-003	0.0000	5.0519	5.0519	2.1000e-004	0.0000	5.0562

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0264	0.0000	0.0264	0.0145	0.0000	0.0145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0422	0.3667	0.3004	4.2000e-004		0.0254	0.0254		0.0243	0.0243	0.0000	37.5878	37.5878	7.4100e-003	0.0000	37.7433
Total	0.0422	0.3667	0.3004	4.2000e-004	0.0264	0.0254	0.0518	0.0145	0.0243	0.0387	0.0000	37.5878	37.5878	7.4100e-003	0.0000	37.7433

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.7000e-004	2.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0661	0.0661	0.0000	0.0000	0.0661
Vendor	2.4100e-003	0.0230	0.0313	6.0000e-005	1.7200e-003	3.4000e-004	2.0700e-003	4.9000e-004	3.2000e-004	8.1000e-004	0.0000	5.3996	5.3996	4.0000e-005	0.0000	5.4004
Worker	9.7800e-003	0.0145	0.1513	4.1000e-004	0.0346	2.4000e-004	0.0348	9.1800e-003	2.2000e-004	9.4100e-003	0.0000	29.9635	29.9635	1.4100e-003	0.0000	29.9932
Total	0.0122	0.0377	0.1828	4.7000e-004	0.0363	5.8000e-004	0.0369	9.6700e-003	5.4000e-004	0.0102	0.0000	35.4291	35.4291	1.4500e-003	0.0000	35.4597

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					0.0103	0.0000	0.0103	5.6500e-003	0.0000	5.6500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0422	0.3667	0.3004	4.2000e-004		0.0254	0.0254		0.0243	0.0243	0.0000	37.5878	37.5878	7.4100e-003	0.0000	37.7433
Total	0.0422	0.3667	0.3004	4.2000e-004	0.0103	0.0254	0.0357	5.6500e-003	0.0243	0.0299	0.0000	37.5878	37.5878	7.4100e-003	0.0000	37.7433

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.7000e-004	2.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0661	0.0661	0.0000	0.0000	0.0661
Vendor	2.4100e-003	0.0230	0.0313	6.0000e-005	1.7200e-003	3.4000e-004	2.0700e-003	4.9000e-004	3.2000e-004	8.1000e-004	0.0000	5.3996	5.3996	4.0000e-005	0.0000	5.4004
Worker	9.7800e-003	0.0145	0.1513	4.1000e-004	0.0346	2.4000e-004	0.0348	9.1800e-003	2.2000e-004	9.4100e-003	0.0000	29.9635	29.9635	1.4100e-003	0.0000	29.9932
Total	0.0122	0.0377	0.1828	4.7000e-004	0.0363	5.8000e-004	0.0369	9.6700e-003	5.4000e-004	0.0102	0.0000	35.4291	35.4291	1.4500e-003	0.0000	35.4597

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0529	0.5260	0.3336	4.7000e-004		0.0355	0.0355		0.0327	0.0327	0.0000	43.6542	43.6542	0.0134	0.0000	43.9351
Total	0.0529	0.5260	0.3336	4.7000e-004		0.0355	0.0355		0.0327	0.0327	0.0000	43.6542	43.6542	0.0134	0.0000	43.9351

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	0.0114	0.1090	0.1482	2.9000e-004	8.1800e-003	1.6300e-003	9.8100e-003	2.3300e-003	1.5000e-003	3.8300e-003	0.0000	25.6094	25.6094	1.8000e-004	0.0000	25.6132
Worker	0.0116	0.0172	0.1794	4.9000e-004	0.0410	2.9000e-004	0.0413	0.0109	2.6000e-004	0.0112	0.0000	35.5281	35.5281	1.6800e-003	0.0000	35.5633
Total	0.0230	0.1262	0.3276	7.8000e-004	0.0492	1.9200e-003	0.0511	0.0132	1.7600e-003	0.0150	0.0000	61.1375	61.1375	1.8600e-003	0.0000	61.1766

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	0.0529	0.5260	0.3336	4.7000e-004		0.0355	0.0355		0.0327	0.0327	0.0000	43.6542	43.6542	0.0134	0.0000	43.9351
Total	0.0529	0.5260	0.3336	4.7000e-004		0.0355	0.0355		0.0327	0.0327	0.0000	43.6542	43.6542	0.0134	0.0000	43.9351

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	0.0114	0.1090	0.1482	2.9000e-004	8.1800e-003	1.6300e-003	9.8100e-003	2.3300e-003	1.5000e-003	3.8300e-003	0.0000	25.6094	25.6094	1.8000e-004	0.0000	25.6132
Worker	0.0116	0.0172	0.1794	4.9000e-004	0.0410	2.9000e-004	0.0413	0.0109	2.6000e-004	0.0112	0.0000	35.5281	35.5281	1.6800e-003	0.0000	35.5633
Total	0.0230	0.1262	0.3276	7.8000e-004	0.0492	1.9200e-003	0.0511	0.0132	1.7600e-003	0.0150	0.0000	61.1375	61.1375	1.8600e-003	0.0000	61.1766

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0793	0.8054	0.5677	8.3000e-004		0.0519	0.0519		0.0477	0.0477	0.0000	76.0296	76.0296	0.0237	0.0000	76.5266
Total	0.0793	0.8054	0.5677	8.3000e-004		0.0519	0.0519		0.0477	0.0477	0.0000	76.0296	76.0296	0.0237	0.0000	76.5266

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	0.0189	0.1771	0.2507	5.1000e-004	0.0145	2.7200e-003	0.0172	4.1300e-003	2.5000e-003	6.6400e-003	0.0000	44.5860	44.5860	3.2000e-004	0.0000	44.5927
Worker	0.0187	0.0277	0.2903	8.6000e-004	0.0726	5.0000e-004	0.0731	0.0193	4.6000e-004	0.0198	0.0000	60.5639	60.5639	2.7700e-003	0.0000	60.6221
Total	0.0376	0.2049	0.5409	1.3700e-003	0.0871	3.2200e-003	0.0903	0.0234	2.9600e-003	0.0264	0.0000	105.1499	105.1499	3.0900e-003	0.0000	105.2149

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	0.0793	0.8054	0.5677	8.3000e-004		0.0519	0.0519		0.0477	0.0477	0.0000	76.0295	76.0295	0.0237	0.0000	76.5266
Total	0.0793	0.8054	0.5677	8.3000e-004		0.0519	0.0519		0.0477	0.0477	0.0000	76.0295	76.0295	0.0237	0.0000	76.5266

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	0.0189	0.1771	0.2507	5.1000e-004	0.0145	2.7200e-003	0.0172	4.1300e-003	2.5000e-003	6.6400e-003	0.0000	44.5860	44.5860	3.2000e-004	0.0000	44.5927
Worker	0.0187	0.0277	0.2903	8.6000e-004	0.0726	5.0000e-004	0.0731	0.0193	4.6000e-004	0.0198	0.0000	60.5639	60.5639	2.7700e-003	0.0000	60.6221
Total	0.0376	0.2049	0.5409	1.3700e-003	0.0871	3.2200e-003	0.0903	0.0234	2.9600e-003	0.0264	0.0000	105.1499	105.1499	3.0900e-003	0.0000	105.2149

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	0.0967					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0221	0.0204	3.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	2.8086	2.8086	2.7000e-004	0.0000	2.8142
Total	0.1000	0.0221	0.0204	3.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	2.8086	2.8086	2.7000e-004	0.0000	2.8142

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.1000e-004	6.6300e-003	9.3800e-003	2.0000e-005	5.4000e-004	1.0000e-004	6.4000e-004	1.5000e-004	9.0000e-005	2.5000e-004	0.0000	1.6682	1.6682	1.0000e-005	0.0000	1.6684
Worker	2.8000e-003	4.1500e-003	0.0434	1.3000e-004	0.0109	7.0000e-005	0.0109	2.8900e-003	7.0000e-005	2.9600e-003	0.0000	9.0640	9.0640	4.1000e-004	0.0000	9.0727
Total	3.5100e-003	0.0108	0.0528	1.5000e-004	0.0114	1.7000e-004	0.0116	3.0400e-003	1.6000e-004	3.2100e-003	0.0000	10.7322	10.7322	4.2000e-004	0.0000	10.7411

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0967					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0221	0.0204	3.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	2.8086	2.8086	2.7000e-004	0.0000	2.8142
Total	0.1000	0.0221	0.0204	3.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	2.8086	2.8086	2.7000e-004	0.0000	2.8142

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.1000e-004	6.6300e-003	9.3800e-003	2.0000e-005	5.4000e-004	1.0000e-004	6.4000e-004	1.5000e-004	9.0000e-005	2.5000e-004	0.0000	1.6682	1.6682	1.0000e-005	0.0000	1.6684
Worker	2.8000e-003	4.1500e-003	0.0434	1.3000e-004	0.0109	7.0000e-005	0.0109	2.8900e-003	7.0000e-005	2.9600e-003	0.0000	9.0640	9.0640	4.1000e-004	0.0000	9.0727
Total	3.5100e-003	0.0108	0.0528	1.5000e-004	0.0114	1.7000e-004	0.0116	3.0400e-003	1.6000e-004	3.2100e-003	0.0000	10.7322	10.7322	4.2000e-004	0.0000	10.7411

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.0900e-003	0.0862	0.0713	1.1000e-004		5.0500e-003	5.0500e-003		4.6800e-003	4.6800e-003	0.0000	9.5637	9.5637	2.6900e-003	0.0000	9.6202
Paving	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1900e-003	0.0862	0.0713	1.1000e-004		5.0500e-003	5.0500e-003		4.6800e-003	4.6800e-003	0.0000	9.5637	9.5637	2.6900e-003	0.0000	9.6202

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	6.0300e-003	8.5300e-003	2.0000e-005	4.9000e-004	9.0000e-005	5.9000e-004	1.4000e-004	9.0000e-005	2.3000e-004	0.0000	1.5165	1.5165	1.0000e-005	0.0000	1.5168
Worker	2.5400e-003	3.7700e-003	0.0395	1.2000e-004	9.8800e-003	7.0000e-005	9.9500e-003	2.6200e-003	6.0000e-005	2.6900e-003	0.0000	8.2400	8.2400	3.8000e-004	0.0000	8.2479
Total	3.1800e-003	9.8000e-003	0.0480	1.4000e-004	0.0104	1.6000e-004	0.0105	2.7600e-003	1.5000e-004	2.9200e-003	0.0000	9.7565	9.7565	3.9000e-004	0.0000	9.7647

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	9.0900e-003	0.0862	0.0713	1.1000e-004		5.0500e-003	5.0500e-003		4.6800e-003	4.6800e-003	0.0000	9.5637	9.5637	2.6900e-003	0.0000	9.6202
Paving	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1900e-003	0.0862	0.0713	1.1000e-004		5.0500e-003	5.0500e-003		4.6800e-003	4.6800e-003	0.0000	9.5637	9.5637	2.6900e-003	0.0000	9.6202

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.4000e-004	6.0300e-003	8.5300e-003	2.0000e-005	4.9000e-004	9.0000e-005	5.9000e-004	1.4000e-004	9.0000e-005	2.3000e-004	0.0000	1.5165	1.5165	1.0000e-005	0.0000	1.5168
Worker	2.5400e-003	3.7700e-003	0.0395	1.2000e-004	9.8800e-003	7.0000e-005	9.9500e-003	2.6200e-003	6.0000e-005	2.6900e-003	0.0000	8.2400	8.2400	3.8000e-004	0.0000	8.2479
Total	3.1800e-003	9.8000e-003	0.0480	1.4000e-004	0.0104	1.6000e-004	0.0105	2.7600e-003	1.5000e-004	2.9200e-003	0.0000	9.7565	9.7565	3.9000e-004	0.0000	9.7647

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3677	0.7463	3.4906	8.9600e-003	0.6436	0.0100	0.6536	0.1720	9.2300e-003	0.1812	0.0000	662.2096	662.2096	0.0257	0.0000	662.7492
Unmitigated	0.3677	0.7463	3.4906	8.9600e-003	0.6436	0.0100	0.6536	0.1720	9.2300e-003	0.1812	0.0000	662.2096	662.2096	0.0257	0.0000	662.7492

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	865.07	548.25	702.20	1,703,625	1,703,625
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	865.07	548.25	702.20	1,703,625	1,703,625

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	69.4732	69.4732	3.1900e-003	6.6000e-004	69.7451
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	69.4732	69.4732	3.1900e-003	6.6000e-004	69.7451
NaturalGas Mitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257
NaturalGas Unmitigated	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	568569	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257
Total		3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	568569	3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		3.0700e-003	0.0279	0.0234	1.7000e-004		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	30.3410	30.3410	5.8000e-004	5.6000e-004	30.5257

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	242772	69.4732	3.1900e-003	6.6000e-004	69.7451
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		69.4732	3.1900e-003	6.6000e-004	69.7451

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	242772	69.4732	3.1900e-003	6.6000e-004	69.7451
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		69.4732	3.1900e-003	6.6000e-004	69.7451

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1992	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003
Unmitigated	0.1992	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003
Total	0.1992	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1508					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003
Total	0.1992	1.0000e-005	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0400e-003	1.0400e-003	0.0000	0.0000	1.1000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.3098	0.0510	1.2800e-003	10.7773
Unmitigated	9.3098	0.0510	1.2800e-003	10.7780

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	1.55369 / 0.952262	9.3098	0.0510	1.2800e-003	10.7780
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		9.3098	0.0510	1.2800e-003	10.7780

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	1.55369 / 0.952262	9.3098	0.0510	1.2800e-003	10.7773
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		9.3098	0.0510	1.2800e-003	10.7773

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.3959	1.7963	0.0000	68.1191
Unmitigated	30.3959	1.7963	0.0000	68.1191

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	149.74	30.3959	1.7963	0.0000	68.1191
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		30.3959	1.7963	0.0000	68.1191

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	149.74	30.3959	1.7963	0.0000	68.1191
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		30.3959	1.7963	0.0000	68.1191

9.0 Operational Offroad

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

OC Juvenile Hall
Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.66	1000sqft	0.08	3,660.00	0
Other Non-Asphalt Surfaces	4.67	1000sqft	0.11	4,670.00	0
Other Non-Asphalt Surfaces	7.13	1000sqft	0.16	7,125.00	0
Health Club	26.27	1000sqft	0.60	26,274.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information received from client

Construction Phase - Construction schedule adjusted to match information received from client

Trips and VMT - Information received from client: 5 trucks/day for demolition. Assuming 15 CY truck, 56 trucks for soil import of 835 CY over grading duration, i.e. 2 truck trips/day

Demolition - 2000 square feet of asphalt and 1500 square feet of concrete

Grading - Infor received - 835 cubic yards of soil import

Architectural Coating - Rule 1113, Info received from client: 19,500 sf. to receive AC.

Construction Off-road Equipment Mitigation - Rule 403

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
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	70.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	PhaseEndDate	8/23/2018	7/24/2018
tblConstructionPhase	PhaseStartDate	7/25/2018	6/25/2018
tblGrading	AcresOfGrading	5.00	0.50
tblGrading	MaterialImported	0.00	835.00
tblLandUse	LandUseSquareFeet	7,130.00	7,125.00
tblLandUse	LandUseSquareFeet	26,270.00	26,274.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	16.00	10.00
tblTripsAndVMT	HaulingTripNumber	104.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	7.00	32.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	5.00	90.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00
tblTripsAndVMT	WorkerTripNumber	4.00	90.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/15/2017	5/16/2017	5	22	
2	Site Preparation	Site Preparation	5/17/2017	5/30/2017	5	10	
3	Grading	Grading	5/31/2017	9/5/2017	5	70	
4	Building Construction	Building Construction	9/6/2017	7/24/2018	5	230	
5	Architectural Coating	Architectural Coating	6/25/2018	7/24/2018	5	22	
6	Paving	Paving	7/25/2018	8/21/2018	5	20	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 62,594; Non-Residential Outdoor: 20,865 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	90.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	90.00	8.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1566	0.0000	0.1566	0.0237	0.0000	0.0237			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.1566	0.7266	0.8832	0.0237	0.6930	0.7167		1,183.8131	1,183.8131	0.2333		1,188.7118

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	7.8300e-003	0.1149	0.0868	3.3000e-004	7.9200e-003	1.7200e-003	9.6400e-003	2.1700e-003	1.5900e-003	3.7500e-003		33.1413	33.1413	2.3000e-004		33.1462
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.2921	0.4812	4.5935	0.0125	1.0139	8.5900e-003	1.0225	0.2690	7.9400e-003	0.2769		1,014.7975	1,014.7975	0.0448		1,015.7382

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0611	0.0000	0.0611	9.2500e-003	0.0000	9.2500e-003			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.0611	0.7266	0.7877	9.2500e-003	0.6930	0.7022	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118

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	7.8300e-003	0.1149	0.0868	3.3000e-004	7.9200e-003	1.7200e-003	9.6400e-003	2.1700e-003	1.5900e-003	3.7500e-003		33.1413	33.1413	2.3000e-004		33.1462
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.2921	0.4812	4.5935	0.0125	1.0139	8.5900e-003	1.0225	0.2690	7.9400e-003	0.2769		1,014.7975	1,014.7975	0.0448		1,015.7382

3.3 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					0.0530	0.0000	0.0530	5.7300e-003	0.0000	5.7300e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089		955.8663	955.8663	0.2929		962.0167
Total	1.2694	12.6852	7.2319	9.3300e-003	0.0530	0.7705	0.8235	5.7300e-003	0.7089	0.7146		955.8663	955.8663	0.2929		962.0167

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	0.0645	0.6296	0.7693	1.7300e-003	0.0500	9.7900e-003	0.0598	0.0142	9.0000e-003	0.0232		170.6634	170.6634	1.1900e-003		170.6884
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.3488	0.9959	5.2760	0.0139	1.0560	0.0167	1.0727	0.2810	0.0154	0.2964		1,152.3196	1,152.3196	0.0458		1,153.2804

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0207	0.0000	0.0207	2.2300e-003	0.0000	2.2300e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089	0.0000	955.8663	955.8663	0.2929		962.0167
Total	1.2694	12.6852	7.2319	9.3300e-003	0.0207	0.7705	0.7912	2.2300e-003	0.7089	0.7111	0.0000	955.8663	955.8663	0.2929		962.0167

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	0.0645	0.6296	0.7693	1.7300e-003	0.0500	9.7900e-003	0.0598	0.0142	9.0000e-003	0.0232		170.6634	170.6634	1.1900e-003		170.6884
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.3488	0.9959	5.2760	0.0139	1.0560	0.0167	1.0727	0.2810	0.0154	0.2964		1,152.3196	1,152.3196	0.0458		1,153.2804

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7541	0.0000	0.7541	0.4140	0.0000	0.4140			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.7541	0.7266	1.4807	0.4140	0.6930	1.1070		1,183.8131	1,183.8131	0.2333		1,188.7118

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9000e-004	7.2200e-003	5.4600e-003	2.0000e-005	5.0000e-004	1.1000e-004	6.1000e-004	1.4000e-004	1.0000e-004	2.4000e-004		2.0832	2.0832	1.0000e-005		2.0835
Vendor	0.0645	0.6296	0.7693	1.7300e-003	0.0500	9.7900e-003	0.0598	0.0142	9.0000e-003	0.0232		170.6634	170.6634	1.1900e-003		170.6884
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.3493	1.0031	5.2814	0.0140	1.0565	0.0168	1.0733	0.2812	0.0155	0.2966		1,154.4027	1,154.4027	0.0458		1,155.3639

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2941	0.0000	0.2941	0.1615	0.0000	0.1615			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.2941	0.7266	1.0207	0.1615	0.6930	0.8544	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9000e-004	7.2200e-003	5.4600e-003	2.0000e-005	5.0000e-004	1.1000e-004	6.1000e-004	1.4000e-004	1.0000e-004	2.4000e-004		2.0832	2.0832	1.0000e-005		2.0835
Vendor	0.0645	0.6296	0.7693	1.7300e-003	0.0500	9.7900e-003	0.0598	0.0142	9.0000e-003	0.0232		170.6634	170.6634	1.1900e-003		170.6884
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.3493	1.0031	5.2814	0.0140	1.0565	0.0168	1.0733	0.2812	0.0155	0.2966		1,154.4027	1,154.4027	0.0458		1,155.3639

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919
Total	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919

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	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.5424	2.8847	7.5837	0.0191	1.2060	0.0460	1.2521	0.3238	0.0424	0.3661		1,664.3097	1,664.3097	0.0493		1,665.3457

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	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919
Total	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919

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	0.2581	2.5184	3.0771	6.9100e-003	0.2000	0.0392	0.2392	0.0570	0.0360	0.0930		682.6535	682.6535	4.7700e-003		682.7537
Worker	0.2843	0.3663	4.5067	0.0122	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		981.6562	981.6562	0.0446		982.5920
Total	0.5424	2.8847	7.5837	0.0191	1.2060	0.0460	1.2521	0.3238	0.0424	0.3661		1,664.3097	1,664.3097	0.0493		1,665.3457

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491		1,140.2487	1,140.2487	0.3550		1,147.7032
Total	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491		1,140.2487	1,140.2487	0.3550		1,147.7032

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	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.5012	2.6460	7.0483	0.0191	1.2060	0.0437	1.2497	0.3238	0.0402	0.3640		1,615.9429	1,615.9429	0.0463		1,616.9159

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	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491	0.0000	1,140.2487	1,140.2487	0.3550		1,147.7032
Total	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491	0.0000	1,140.2487	1,140.2487	0.3550		1,147.7032

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	0.2417	2.3117	2.9210	6.9000e-003	0.2000	0.0369	0.2369	0.0570	0.0339	0.0909		671.0637	671.0637	4.7500e-003		671.1633
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.5012	2.6460	7.0483	0.0191	1.2060	0.0437	1.2497	0.3238	0.0402	0.3640		1,615.9429	1,615.9429	0.0463		1,616.9159

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	8.7917					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	9.0903	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	0.0604	0.5779	0.7303	1.7300e-003	0.0500	9.2200e-003	0.0592	0.0142	8.4800e-003	0.0227		167.7659	167.7659	1.1900e-003		167.7908
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.3199	0.9122	4.8576	0.0139	1.0560	0.0160	1.0720	0.2810	0.0148	0.2958		1,112.6452	1,112.6452	0.0428		1,113.5434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.7917					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	9.0903	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	0.0604	0.5779	0.7303	1.7300e-003	0.0500	9.2200e-003	0.0592	0.0142	8.4800e-003	0.0227		167.7659	167.7659	1.1900e-003		167.7908
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.3199	0.9122	4.8576	0.0139	1.0560	0.0160	1.0720	0.2810	0.0148	0.2958		1,112.6452	1,112.6452	0.0428		1,113.5434

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9092	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681		1,054.2145	1,054.2145	0.2968		1,060.4462
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9197	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681		1,054.2145	1,054.2145	0.2968		1,060.4462

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	0.0604	0.5779	0.7303	1.7300e-003	0.0500	9.2200e-003	0.0592	0.0142	8.4800e-003	0.0227		167.7659	167.7659	1.1900e-003		167.7908
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.3199	0.9122	4.8576	0.0139	1.0560	0.0160	1.0720	0.2810	0.0148	0.2958		1,112.6452	1,112.6452	0.0428		1,113.5434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9092	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681	0.0000	1,054.2145	1,054.2145	0.2968		1,060.4462
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9197	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681	0.0000	1,054.2145	1,054.2145	0.2968		1,060.4462

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	0.0604	0.5779	0.7303	1.7300e-003	0.0500	9.2200e-003	0.0592	0.0142	8.4800e-003	0.0227		167.7659	167.7659	1.1900e-003		167.7908
Worker	0.2595	0.3343	4.1273	0.0122	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		944.8792	944.8792	0.0416		945.7526
Total	0.3199	0.9122	4.8576	0.0139	1.0560	0.0160	1.0720	0.2810	0.0148	0.2958		1,112.6452	1,112.6452	0.0428		1,113.5434

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.1970	4.1534	20.4344	0.0553	3.9093	0.0597	3.9690	1.0431	0.0550	1.0981		4,501.7662	4,501.7662	0.1692		4,505.3191
Unmitigated	2.1970	4.1534	20.4344	0.0553	3.9093	0.0597	3.9690	1.0431	0.0550	1.0981		4,501.7662	4,501.7662	0.1692		4,505.3191

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	865.07	548.25	702.20	1,703,625	1,703,625
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	865.07	548.25	702.20	1,703,625	1,703,625

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
	lb/day										lb/day						
NaturalGas Mitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116			183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770
NaturalGas Unmitigated	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116			183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	1557.72	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Health Club	1.55772	0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0168	0.1527	0.1283	9.2000e-004		0.0116	0.0116		0.0116	0.0116		183.2617	183.2617	3.5100e-003	3.3600e-003	184.3770

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0916	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003
Unmitigated	1.0916	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1000e-004	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003
Total	1.0916	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2650					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.1000e-004	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003
Total	1.0916	4.0000e-005	4.3200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.1300e-003	9.1300e-003	3.0000e-005		9.6600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

OC Juvenile Hall
Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	3.66	1000sqft	0.08	3,660.00	0
Other Non-Asphalt Surfaces	4.67	1000sqft	0.11	4,670.00	0
Other Non-Asphalt Surfaces	7.13	1000sqft	0.16	7,125.00	0
Health Club	26.27	1000sqft	0.60	26,274.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information received from client

Construction Phase - Construction schedule adjusted to match information received from client

Trips and VMT - Information received from client: 5 trucks/day for demolition. Assuming 15 CY truck, 56 trucks for soil import of 835 CY over grading duration, i.e. 2 truck trips/day

Vendor trips during Building Construction include 12 concrete trucks and 4 delivery trucks per day.

Demolition - 2000 square feet of asphalt and 1500 square feet of concrete

Grading - Infor received - 835 cubic yards of soil import

Architectural Coating - Rule 1113, Info received from client: 19,500 sf. to receive AC.

Construction Off-road Equipment Mitigation - Rule 403

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
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	70.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblConstructionPhase	PhaseEndDate	8/23/2018	7/24/2018
tblConstructionPhase	PhaseStartDate	7/25/2018	6/25/2018
tblGrading	AcresOfGrading	5.00	0.50
tblGrading	MaterialImported	0.00	835.00
tblLandUse	LandUseSquareFeet	7,130.00	7,125.00
tblLandUse	LandUseSquareFeet	26,270.00	26,274.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripNumber	16.00	10.00
tblTripsAndVMT	HaulingTripNumber	104.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	7.00	32.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	5.00	90.00
tblTripsAndVMT	WorkerTripNumber	10.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00
tblTripsAndVMT	WorkerTripNumber	18.00	90.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/15/2017	5/16/2017	5	22	
2	Site Preparation	Site Preparation	5/17/2017	5/30/2017	5	10	
3	Grading	Grading	5/31/2017	9/5/2017	5	70	
4	Building Construction	Building Construction	9/6/2017	7/24/2018	5	230	
5	Architectural Coating	Architectural Coating	6/25/2018	7/24/2018	5	22	
6	Paving	Paving	7/25/2018	8/21/2018	5	20	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 62,594; Non-Residential Outdoor: 20,865 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	90.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	90.00	8.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	90.00	32.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	90.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1566	0.0000	0.1566	0.0237	0.0000	0.0237			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.1566	0.7266	0.8832	0.0237	0.6930	0.7167		1,183.8131	1,183.8131	0.2333		1,188.7118

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	8.3400e-003	0.1188	0.1003	3.3000e-004	7.9200e-003	1.7300e-003	9.6500e-003	2.1700e-003	1.5900e-003	3.7600e-003		33.0622	33.0622	2.4000e-004		33.0672
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3072	0.5216	4.3328	0.0119	1.0139	8.6000e-003	1.0225	0.2690	7.9400e-003	0.2769		962.7355	962.7355	0.0448		963.6763

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0611	0.0000	0.0611	9.2500e-003	0.0000	9.2500e-003			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.0611	0.7266	0.7877	9.2500e-003	0.6930	0.7022	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118

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	8.3400e-003	0.1188	0.1003	3.3000e-004	7.9200e-003	1.7300e-003	9.6500e-003	2.1700e-003	1.5900e-003	3.7600e-003		33.0622	33.0622	2.4000e-004		33.0672
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3072	0.5216	4.3328	0.0119	1.0139	8.6000e-003	1.0225	0.2690	7.9400e-003	0.2769		962.7355	962.7355	0.0448		963.6763

3.3 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					0.0530	0.0000	0.0530	5.7300e-003	0.0000	5.7300e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089		955.8663	955.8663	0.2929		962.0167
Total	1.2694	12.6852	7.2319	9.3300e-003	0.0530	0.7705	0.8235	5.7300e-003	0.7089	0.7146		955.8663	955.8663	0.2929		962.0167

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	0.0713	0.6441	0.9323	1.7200e-003	0.0500	9.8900e-003	0.0599	0.0142	9.0900e-003	0.0233		169.2207	169.2207	1.2300e-003		169.2466
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3701	1.0469	5.1649	0.0133	1.0560	0.0168	1.0728	0.2810	0.0154	0.2965		1,098.8941	1,098.8941	0.0458		1,099.8557

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0207	0.0000	0.0207	2.2300e-003	0.0000	2.2300e-003			0.0000			0.0000
Off-Road	1.2694	12.6852	7.2319	9.3300e-003		0.7705	0.7705		0.7089	0.7089	0.0000	955.8663	955.8663	0.2929		962.0167
Total	1.2694	12.6852	7.2319	9.3300e-003	0.0207	0.7705	0.7912	2.2300e-003	0.7089	0.7111	0.0000	955.8663	955.8663	0.2929		962.0167

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	0.0713	0.6441	0.9323	1.7200e-003	0.0500	9.8900e-003	0.0599	0.0142	9.0900e-003	0.0233		169.2207	169.2207	1.2300e-003		169.2466
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3701	1.0469	5.1649	0.0133	1.0560	0.0168	1.0728	0.2810	0.0154	0.2965		1,098.8941	1,098.8941	0.0458		1,099.8557

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7541	0.0000	0.7541	0.4140	0.0000	0.4140			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930		1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.7541	0.7266	1.4807	0.4140	0.6930	1.1070		1,183.8131	1,183.8131	0.2333		1,188.7118

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	5.2000e-004	7.4700e-003	6.3000e-003	2.0000e-005	5.0000e-004	1.1000e-004	6.1000e-004	1.4000e-004	1.0000e-004	2.4000e-004		2.0782	2.0782	1.0000e-005		2.0785
Vendor	0.0713	0.6441	0.9323	1.7200e-003	0.0500	9.8900e-003	0.0599	0.0142	9.0900e-003	0.0233		169.2207	169.2207	1.2300e-003		169.2466
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3707	1.0544	5.1712	0.0133	1.0565	0.0169	1.0734	0.2812	0.0155	0.2967		1,100.9723	1,100.9723	0.0458		1,101.9342

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2941	0.0000	0.2941	0.1615	0.0000	0.1615			0.0000			0.0000
Off-Road	1.2049	10.4761	8.5825	0.0120		0.7266	0.7266		0.6930	0.6930	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118
Total	1.2049	10.4761	8.5825	0.0120	0.2941	0.7266	1.0207	0.1615	0.6930	0.8544	0.0000	1,183.8131	1,183.8131	0.2333		1,188.7118

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	5.2000e-004	7.4700e-003	6.3000e-003	2.0000e-005	5.0000e-004	1.1000e-004	6.1000e-004	1.4000e-004	1.0000e-004	2.4000e-004		2.0782	2.0782	1.0000e-005		2.0785
Vendor	0.0713	0.6441	0.9323	1.7200e-003	0.0500	9.8900e-003	0.0599	0.0142	9.0900e-003	0.0233		169.2207	169.2207	1.2300e-003		169.2466
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.3707	1.0544	5.1712	0.0133	1.0565	0.0169	1.0734	0.2812	0.0155	0.2967		1,100.9723	1,100.9723	0.0458		1,101.9342

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919
Total	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869		1,159.5310	1,159.5310	0.3553		1,166.9919

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	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.5841	2.9790	7.9619	0.0184	1.2060	0.0464	1.2525	0.3238	0.0427	0.3665		1,606.5563	1,606.5563	0.0495		1,607.5954

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	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919
Total	1.2740	12.6738	8.0395	0.0113		0.8553	0.8553		0.7869	0.7869	0.0000	1,159.5310	1,159.5310	0.3553		1,166.9919

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	0.2853	2.5762	3.7294	6.8700e-003	0.2000	0.0396	0.2396	0.0570	0.0364	0.0933		676.8829	676.8829	4.9200e-003		676.9863
Worker	0.2988	0.4028	4.2326	0.0116	1.0060	6.8700e-003	1.0129	0.2668	6.3500e-003	0.2731		929.6733	929.6733	0.0446		930.6091
Total	0.5841	2.9790	7.9619	0.0184	1.2060	0.0464	1.2525	0.3238	0.0427	0.3665		1,606.5563	1,606.5563	0.0495		1,607.5954

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491		1,140.2487	1,140.2487	0.3550		1,147.7032
Total	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491		1,140.2487	1,140.2487	0.3550		1,147.7032

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	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.5384	2.7313	7.4325	0.0184	1.2060	0.0441	1.2501	0.3238	0.0406	0.3643		1,560.1809	1,560.1809	0.0465		1,561.1571

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	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491	0.0000	1,140.2487	1,140.2487	0.3550		1,147.7032
Total	1.0786	10.9578	7.7239	0.0113		0.7055	0.7055		0.6491	0.6491	0.0000	1,140.2487	1,140.2487	0.3550		1,147.7032

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	0.2660	2.3637	3.5684	6.8500e-003	0.2000	0.0373	0.2373	0.0570	0.0343	0.0912		665.3779	665.3779	4.9000e-003		665.4808
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.5384	2.7313	7.4325	0.0184	1.2060	0.0441	1.2501	0.3238	0.0406	0.3643		1,560.1809	1,560.1809	0.0465		1,561.1571

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	8.7917					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	9.0903	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	0.0665	0.5909	0.8921	1.7100e-003	0.0500	9.3100e-003	0.0593	0.0142	8.5700e-003	0.0228		166.3445	166.3445	1.2300e-003		166.3702
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.3389	0.9585	4.7562	0.0133	1.0560	0.0161	1.0721	0.2810	0.0149	0.2959		1,061.1475	1,061.1475	0.0428		1,062.0465

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.7917					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	9.0903	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	0.0665	0.5909	0.8921	1.7100e-003	0.0500	9.3100e-003	0.0593	0.0142	8.5700e-003	0.0228		166.3445	166.3445	1.2300e-003		166.3702
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.3389	0.9585	4.7562	0.0133	1.0560	0.0161	1.0721	0.2810	0.0149	0.2959		1,061.1475	1,061.1475	0.0428		1,062.0465

3.7 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9092	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681		1,054.2145	1,054.2145	0.2968		1,060.4462
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9197	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681		1,054.2145	1,054.2145	0.2968		1,060.4462

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	0.0665	0.5909	0.8921	1.7100e-003	0.0500	9.3100e-003	0.0593	0.0142	8.5700e-003	0.0228		166.3445	166.3445	1.2300e-003		166.3702
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.3389	0.9585	4.7562	0.0133	1.0560	0.0161	1.0721	0.2810	0.0149	0.2959		1,061.1475	1,061.1475	0.0428		1,062.0465

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9092	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681	0.0000	1,054.2145	1,054.2145	0.2968		1,060.4462
Paving	0.0105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9197	8.6233	7.1255	0.0111		0.5050	0.5050		0.4681	0.4681	0.0000	1,054.2145	1,054.2145	0.2968		1,060.4462

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	0.0665	0.5909	0.8921	1.7100e-003	0.0500	9.3100e-003	0.0593	0.0142	8.5700e-003	0.0228		166.3445	166.3445	1.2300e-003		166.3702
Worker	0.2724	0.3675	3.8641	0.0116	1.0060	6.7900e-003	1.0128	0.2668	6.2900e-003	0.2731		894.8030	894.8030	0.0416		895.6763
Total	0.3389	0.9585	4.7562	0.0133	1.0560	0.0161	1.0721	0.2810	0.0149	0.2959		1,061.1475	1,061.1475	0.0428		1,062.0465