Focused Air Quality and Greenhouse Gas Emission Analysis for the Banyan Street Homes, City of Rancho Cucamonga

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1.0 EXISTING AIR QUALITY

1.1 Project Description

The proposed project consists of 9 single family homes on 5.18 gross acres. The project site is bordered on the north by Banyan Street and is approximately 0.32 miles north of the Foothill Freeway (State Route 210). Existing residences lie between the freeway and project site. Existing residences are located on the west, south, and east sides of the project. The project includes solar panels per California requirements. The number and size of the solar panels will be engineered as part of the final house design, but preliminary information is available. The solar panels will be sized to cover the electrical requirements of typical households of the sizes proposed. Two house plans are proposed. Preliminary calculations indicate that Plan 1 would be fitted with solar panels with an output capacity of 3.93 kWdc, and Plan 2 would have panels with a 4.72 kWdc capacity. Additional details are provided in Section 2.3. A vicinity map is presented as Exhibit 1 and a site plan is presented as Exhibit 2. .

This report focuses on the potential air quality impacts associated with the construction and operation of this project. Greenhouse gas emissions due to construction and operation are also assessed.

2.0 POTENTIAL CONSTRUCTION IMPACTS

2.1 Thresholds of Significance

2.1.1 Regional Air Quality

In their "1993 CEQA Air Quality Handbook", the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. Table 1 presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on air quality. It should be noted the thresholds recommended by the SCAQMD are conservative and subject to controversy. It is up to the individual lead agencies to determine if the SCAQMD thresholds are appropriate for their projects.

Table 1 SCAQMD Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions (lbs./day)					
	CO	ROG	NOx	PM10	PM2.5	SOx
Construction	*550*	*75*	*100*	*150*	*55*	*150*
Operation	*550*	*55*	*55*	*150*	*55*	*150*

Exhibit 1 - Vicinity Map

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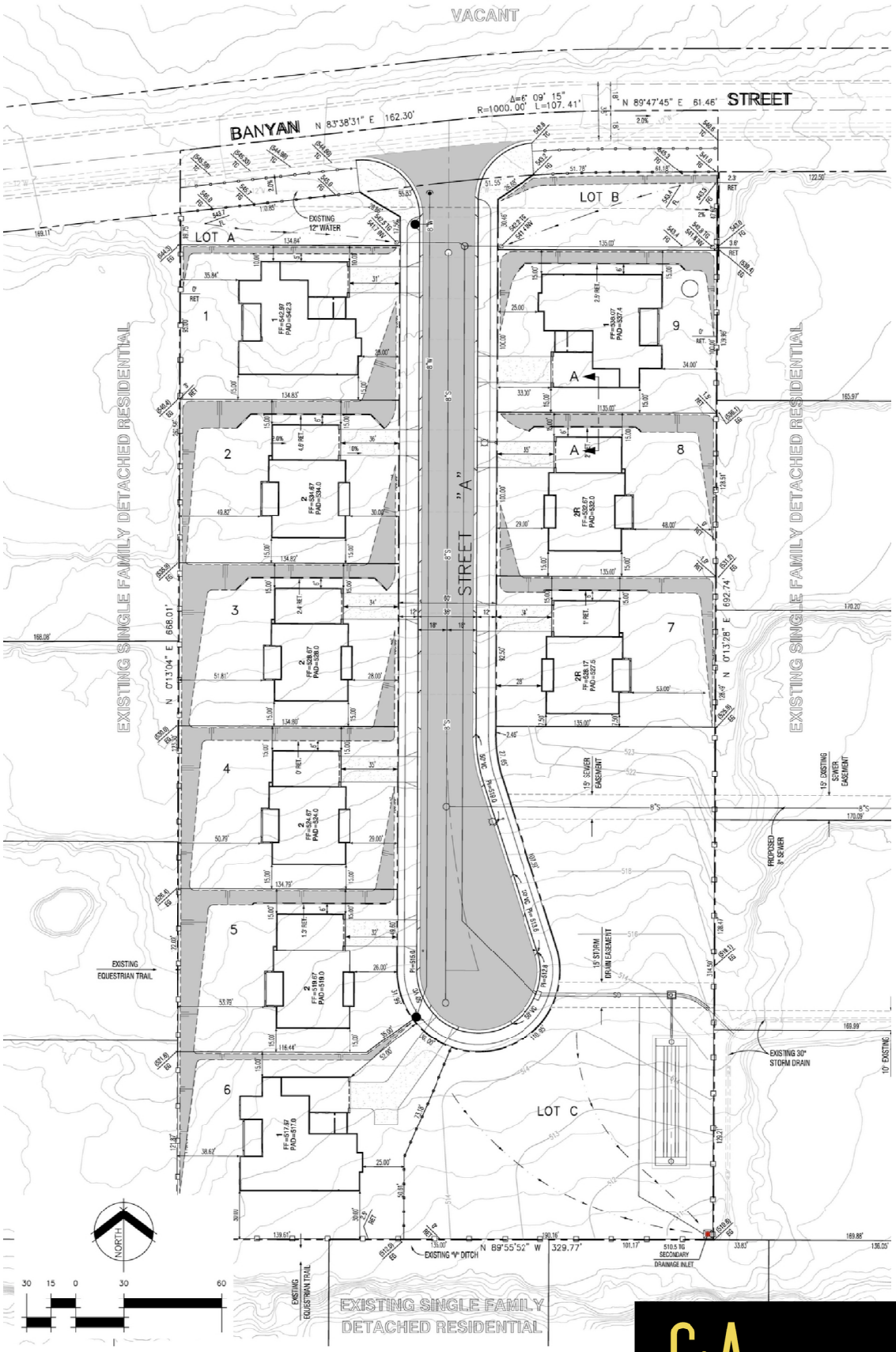
Exhibit 2 - Site Plan



G&A

2.1.2 Localized Significance Thresholds

As part of the SCAQMD's environmental justice program, attention was focused on localized effects of air quality. In accordance with Governing Board direction, SCAQMD staff developed localized significance threshold (LST) methodology and mass rate look-up tables by Source Receptor Area (SRA) that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area. The LST methodology is described in "Final Localized Significance Threshold Methodology" updated in 2009 by the SCAQMD and is available at the SCAQMD website (http://aqmd.gov/ceqa/handbook/LST/LST.html).

The LST mass rate look-up tables provided by the SCAQMD allow one to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up tables and no potentially significant impacts are found to be associated with other environmental issues, then the proposed construction or operation activity is not significant for local air quality.

The LST mass rate look-up tables are applicable to the following pollutants only: oxides of nitrogen (NOx), carbon monoxide (CO), particulate matter less than 10 microns in aerodynamic diameter (PM10), and particulate matter less than 2.5 microns (PM2.5). LSTs are derived based on the location of the activity (i.e., the source/receptor area); the emission rates of NOx, CO, PM2.5 and PM10; and the distance to the nearest exposed individual.

The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds. If receptors are within 25 meters of the site, the methodology document says that the threshold for the 25 meter distance should be used.

The project is located in Source Receptor Area (SRA) 32. The nearest existing sensitive land use are directly adjacent to construction areas, and therefore, a distance of 25 meters was used per the SCAQMD protocol. Table 2 summarizes the LSTs for construction and operation. A project with daily emission rates below the thresholds during construction and operation is considered to have a less than significant effect on local air quality.

Table 2 Localized Significance Thresholds at the Nearest Receptors

Description	Localized Significance Threshold (lbs./day)			
	NOx	CO	PM10	PM2.5
Construction Activities	270	2,193	16	9
Operation	270	2,193	4	2

2.2 Construction Impacts

Temporary impacts can result from project construction activities. Air pollutants are emitted by construction equipment and fugitive dust is generated during grading and construction.

Emissions during the phases of construction were calculated using the California Emissions Estimator Model (CalEEMod version 2016.3.2). CalEEMod is a computer program developed by the SCAQMD in conjunction with the California Air Resources Board (CARB). The model calculates emissions for construction and operation of various projects. For on-road vehicular emissions, the CalEEMod model utilizes the EMFAC emission rates that have also been developed by CARB.

2.2.1 Regional Short-Term Emissions

CalEEMod considers the following phases in its calculation of construction emissions; site preparation, grading, building construction, paving, and painting. (No significant demolition will occur as part of this project.) The appropriate number of acres, duration of each construction phase, and other key elements of the project were input into the CalEEMod to generate the estimate of emissions. It was assumed that the overlap between construction phases would be minimal. It was assumed that the construction would begin September 2021 and end in November 2022. (A delay in construction start time would reduce emissions a slight amount due to the legislated reduction in diesel emissions for heavy construction equipment.) Work would proceed at 5 days per week. CalEEMod printouts are included in the Appendix, and contain construction and operational information.

Table 3 presents the results of the total emissions calculations for the construction activities discussed above. The highest construction emissions are presented below and represent a worst-case scenario. The projected emissions are compared to the Significance Thresholds described in Section 2.1.2. The CalEEMod printouts are included in the Appendix.

Table 3 Peak Construction Emissions

Activity	Pollutant Emissions (Pounds Per Day) ROG	NOx	CO	SOx	PM10	PM2.5
Site Preparation	4.0	40.6	21.8	0.0	9.3	5.8
Grading	2.4	24.8	16.4	0.0	3.9	2.4
Building Construction	2.2	19.3	18.6	0.0	1.6	1.1
Paving	1.3	11.2	15.0	0.0	0.7	0.6
Architectural Coating	5.8	1.4	2.1	0.0	0.2	0.1
Maximum Daily Emissions	5.8	40.6	21.8	0.0	9.3	5.8
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

The projected construction emissions are all well below the significance thresholds established by the SCAQMD. Therefore, there will be no regional air quality impacts due to construction.

2.2.2 Local Air Quality Impacts Due to Construction

The on-site construction emissions were calculated utilizing CalEEMod. The emissions presented in Table 4 are those that would be emitted from activity for the project site. The construction emissions for each phase are compared to the Localized Significance Thresholds (LSTs) described in Section 2.1.2. Worksheets showing the emission calculations are presented in the Appendix.

Table 4 On-Site Emissions By Construction Activity

Activity	Daily Emissions (lbs./day) NOx	CO	PM10	PM2.5
Site Preparation	40.5	21.2	9.1	5.8
Grading	24.7	15.9	3.7	2.4
Building Const.	17.4	16.6	1.0	0.9
Paving	11.1	14.6	0.6	0.5
Architectural Coating	1.4	1.8	0.1	0.1
LST Thresholds	270	2,193	16	9
Exceed Threshold?	***No***	***No***	***No***	***No***

The local emissions generated by the project will all be below the Local Significance Thresholds. The calculations do include watering the site three times per day during grading which is usually a requirement of the SCAQMD. A mitigation measure is proposed in Section

4.1 that ensures that the site will be watered during grading activities. Therefore, the nearby residences will not be adversely affected during construction. Local air quality impacts during construction will be less than significant with the proposed mitigation measure.

2.2.3 Diesel Particulate Matter Emissions During Construction

In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines (Diesel Particulate Matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that the majority of the heavy construction equipment utilized during construction would be diesel fueled and emit DPM. The South Coast Air Quality Management District (SCAQMD) recommends significance thresholds for new sources of toxic air contaminants at its CEQA Air Quality Analysis Guidance Handbook website (http://www.aqmd.gov/ceqa/hdbk.html). SCAQMD's recommended significance threshold for increased cancer risk is an increase due to the project of greater than 10 in a million. The cancer risk is determined by multiplying the Dose with the Cancer Risk Potency Factor. The Cancer Risk Potency Factor describes the potential risk of developing cancer per unit of average daily dose over a 70-year lifetime. There is no recommendation or requirement by the SCAQMD to evaluate the cancer risk for the type of project proposed.

Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment.) Grading for the project, when the peak diesel exhaust emissions would occur, is expected to take less than 3 months with all construction expected to be completed in less than 2 years. Because of the relatively short duration of construction compared to a 70-year lifespan, diesel emissions resulting from the construction of the project, including truck traffic associated with the project, are not expected to result in a significant impact.

2.3 Operational Impacts

2.3.1 Regional Operational Impacts

Air pollutant emissions due to the project were calculated using the CalEEMod program. The program calculated operational emissions for the proposed project. Assumptions used for inputs to the model included that operation would begin in year 2023, and there would be nine single-family homes on 5.18 acres. On approximately 1.47 of those acres would be a park. Each home would have a natural gas fireplace, and that all electricity would be generated by solar panels. The model used The primary source of emissions generated by the proposed project will be from motor vehicles. Natural gas combustion and re-current painting of the single-family homes will also contribute to the emissions. The modeling is based on an operational year of December 2022 (see Appendix for further operational details). Delays in the project would result in lower emissions due to lower emission factors for motor vehicles.

CalEEMod calculates maximum daily emissions for the summertime and wintertime periods. The results presented below are from the summer or winter emissions, whichever are the higher emissions. Output files from the CalEEMod program are presented in the Appendix.

It should be noted that the projected electrical energy consumption is projected to be 60,219 kWh per year. Whether or not this electrical energy consumption is met with solar panels or not is a mute point for the Air Quality Assessment. Per the SCAQMD Handbook and the CalEEMod User Manual, electrical energy emissions are not to be included in projections for air emissions. The vast majority of air emissions generated for electrical consumption occur outside the air basin, and therefore, are not part of the regional air impact.

Table 5 presents the results of the CalEEMod model showing the maximum daily air pollutant emissions projected for buildout year. The specific data utilized in calculating the emissions are provided in the appendix.

Table 5 Project Emissions (pounds per day)

	ROG	NOx	CO	SOx	PM10	PM2.5
Total Project Emissions	0.6	1.1	3.2	0.0	0.9	0.3
SCQAMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Thresholds	*No*	*No*	*No*	*No*	*No*	*No*

Table 5 shows that the total project emissions are below the SCAQMD thresholds for all criterion pollutants. Therefore, the project will not result in a significant regional air impact and mitigation is not necessary to reduce operational emissions.

Table 6 compares the net change in emissions due to the project to the projected basinwide emissions from the 2016 AQMP. This comparison shows that the project would result in a net increase in emissions that is insignificant in comparison to basinwide emissions.

Table 6 Comparison of Project Emissions with SCAB Emissions

	Pollutant Emissions (tons/day)					
	ROG	NOx	CO	SOx	PM10	PM2.5
Project Emissions	0.0003	0.0005	0.0016	0.0000	0.0004	0.0001
2031 South Coast Air Basin*	345.0	214.0	1,188.0	18.0	N/A	65.0
Project as Percentage of Basin	0.0001%	0.0003%	0.0001%	0.0000%	N/A	0.0002%

* Source: Table 3-4E Final 2016 AQMP

2.3.2 Local Air Quality Impacts Due to Operation

The on-site operational emissions were calculated utilizing CalEEMod. The same assumptions were used as for regional emissions, however, only those emissions generated on-site are used for the local air quality assessment. The emissions presented in Table 7 are those that would be emitted from activity by the project site. The total on-site operational emissions are compared to the Localized Significance Thresholds (LSTs) described in Section 2.1.2. Worksheets showing the emission calculations are presented in the Appendix.

Table 7 On-Site Emissions By Operations

	Daily Emissions (lbs./day)			
Activity	**NOx**	**CO**	**PM10**	**PM2.5**
On-Site Emissions	0.2	0.8	0.02	0.02
LST Thresholds	270	2,193	4	2
Exceed Threshold?	*No*	*No*	*No*	*No*

None of the emissions will exceed the LST significance thresholds. Therefore, the nearby residences will not be adversely affected during operations. Local air quality impacts during operation will be less than significant, and mitigation measures are not needed.

2.3.3 Compliance with Air Quality Planning

The following section deals with the major air planning requirements for this project. Specifically, consistency of the project with the South Coast Air Quality Management Plan (AQMP) is addressed. As discussed below, consistency with the AQMP is a requirement of the California Environmental Quality Act (CEQA). The federal Clean Air Act (CAA) requires plans to demonstrate attainment of the National Ambient Air Quality Standards for which an area is designated as nonattainment. Further, the California Clean Air Act requires the South Coast Air Quality District (SCAQMD) to revise its plan to reduce pollutant concentrations exceeding the California Ambient Air Quality Standards every three years. In the South Coast Air Basin, the SCAQMD and the Southern California Association of Governments, in coordination with local governments and the private sector, develop the Air Quality Management Plan (AQMP) for the air basin to satisfy these requirements. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

An air quality assessment must discuss any inconsistencies between the proposed project and applicable General Plans and regional plans (California Environmental Quality Act (CEQA) guidelines (Section 15125)). Regional plans that apply to the proposed project include the AQMP. In this regard, this section will discuss any inconsistencies between the proposed project and the AQMP.

The purpose of the consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-maker determines that the project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD's CEQA Handbook states "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. The Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, there will not be significant short-term construction impacts on the regional scale. Additionally, there will not be exceedances of the SCAQMD localized significance thresholds (LST), and therefore, local concentrations of pollutants will not be impacted by the project. Therefore, short-term construction activities will not increase the frequency or severity of existing air quality violations.

The proposed project operation will increase regional emissions, but will increase regional emissions by an amount less than the SCAQMD regional thresholds. Additionally, the operational LST analysis indicates that no significant local air quality impacts will result. Because the project is not projected to impact the local or regional air quality, the project is found to be consistent with the AQMP for the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

The emphasis of this criterion is to ensure that the analyses conducted for the project are based on the same forecasts as the AQMP. The "Final 2008 Regional Comprehensive Plan" (RCP) presents a "holistic, strategic plan for defining and solving our inter-related housing, traffic, water, air quality, and other regional challenges." The RCP builds off the local AQMP. It supports technology-based control measures, supports local initiatives to reduce greenhouse emissions, and emphasizes the need for better coordination of land use and transportation planning.

Since the SCAG forecasts are not detailed, the test for consistency of this project is not specific. The AQMP assumptions are based upon projections from local general plans. Projects that are consistent with the local general plan are consistent with the AQMP assumptions. The site is currently zoned very low residential with development allowed for up to 2 dwelling units per acre. The project is consistent with this land use designation. Therefore, the second criterion is met for consistency with the AQMP.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Significance Threshold

The Significance Threshold that will be used for this project is based on SCAQMD's suggested tiered approach, which is consistent with CARB's recommendations. On December 5, 2008, the South Coast Air Quality Management District (SCAQMD) adopted GHG significance threshold for Stationary Sources, Rules and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. The project is compared with the requirements of each tier sequentially and if it complies with any tier, it is determined to not result in a significant impact.

Tier 1 excludes projects that are specifically exempt from SB97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. Tier 4 consists of three decision tree options. Under the first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the second option, the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the third option, project would be excluded if it met sector based performance standards. However, the specifics of the Tier 4 compliance options were not adopted by the SCAQMD board to allow further time to develop the options and coordinate with CARB's GHG significance threshold development efforts. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

The guidance document prepared for the stationary source threshold recommended using the same tiered approach for residential and commercial projects with a 3,000 metric ton CO_2 Equivalent per year (MTCO2EQ/year) Tier 3 screening threshold. However, this was not adopted as the SCAQMD Board felt that more analysis was required along with coordination with CARB's GHG significance threshold development. At subsequent meetings of the SCAQMD GHG Working Group SCAQMD staff recommended two options for the Tier 3 screening threshold for residential and commercial projects. The first option would use a 3,500 MTCO2EQ/year threshold for residential projects, a 1,400 MTCO2EQ/year threshold for commercial projects and a 3,000 MTCO2EQ/year for mixed-use projects. The second option would apply the 3,000 MTCO2EQ/year for all commercial and residential projects.

The SCAQMD proposed compliance options for Tier 4 of the significance thresholds at subsequent GHG Working Group meetings. The first option would be a reduction of 23.9% in GHG emissions over the base case. This percentage reduction is the land use sector portion of the CARB Scoping Plan's overall reduction of 28%. This target would be updated as the AB 32 Scoping Plan is revised. The base case scenario for this reduction still needs to be defined. Residual emissions would need to be less than 25,000 MTCO2EQ/year to comply with the option. Staff proposed efficiency targets for the third option of 4.6 MTCO2EQ/year per service

population (the population of residential portions of projects plus the number of employees of commercial portions of projects.) for project level analysis and 6.6 MTCO2EQ/year for plan level analyses. For project level analyses, residual emissions would need to be less than 25,000 MTCO2EQ/year to comply with this option.

The project is not specifically exempted in SB97 and there are no GHG reduction plans that are consistent with the AB32 GHG reduction goals that with a certified final CEQA document that are applicable to the proposed project. Therefore, the project is not compliant with Tiers 1 or 2. The significance of the project will be determined based on compliance with the Tier 3 and 4 requirements. The project will be considered to have a significant impact if total annual GHG emissions exceed 3,000 MT CO_2EQ. If the 3,000 threshold is exceeded then the annual emissions per service population (the number of residents for residential projects and persons employed for commercial projects) should not exceed 4.6 MT CO_2EQ/yr./person, or a significant impact will be determined. Note that the methodology recommends that total construction emissions be amortized over a 30-year period or the project's expected lifetime if it is less than 30 years.

3.2 Project Emissions

Temporary impacts will result from construction activities. The primary source of GHG emissions generated by construction activities is from the use of diesel-powered construction equipment. Typical emission rates for construction equipment were obtained from CalEEMod (California Emissions Estimator Model). CalEEMod is a computer program that can be used to estimate emissions including operation (vehicle and area) sources, as well as construction projects associated with land development projects in California. Inputs for CalEEMod are discussed in Sections 2.2.1 and 2.3.1.

For the greenhouse gas emissions, all electricity will be supplied by solar panels on the residences. All electricity for the proposed project will be generated with solar panels. There are three Plan 1 units proposed and each will have solar panels with a capacity of 3.93 kWdc. There are six Plan 2 units which will have solar panels with a capacity of 4.72 kWdc. If these panels operated at full capacity for 12 hours per day they would generate 175,682 kWh per year. The projected electric energy consumption is 60,219 kWh per year. Solar panels do not operate at 100% capacity due to cloudy days and sub-optimal sun angles, but typically, solar panels are able to operate at an efficiency of 34% or higher. At a 34% efficiency the solar panels will generate 60,219 kWh per year and supply all of the electrical energy needed. Therefore, no greenhouse gas emissions will be generated by electrical consumption.

Using CalEEMod, the emissions from construction for the proposed project were calculated and are presented in Table 8. These emissions represent the total level of emissions based on the construction schedule. According to the SCAQMD's CEQA Handbook (Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #5, August 27, 2008), construction emissions are amortized over the life of the project, defined by SCAQMD as 30 years, and are added to the annual operation emissions. Thus, the project's annualized construction

emissions will be added to the operation emissions and compared to the applicable GHG significance threshold. Worksheets showing the specific data used to calculate the construction emissions are presented in the Appendix.

Table 8 Construction GHG Emissions (Metric Tons Per Year)

	CO2	CH4	N2O	CO2EQ
Total Construction Emissions (Metric Tons)	471.0	0.1	0.0000	473.4
Averaged Over 30 Years (Metric Tons Per Year)	15.7	0.0	0.0	15.8

MTCO2EQ = metric tons equivalent carbon dioxide (CO2).

The California Emissions Model (CalEEMod) developed by the SCAQMD in conjunction with the ARB was used to estimate the operational GHG emissions. The results are presented in Table 9. A complete breakdown of the emissions is provided in the Appendix.

Table 9 Annual Project Emissions (Metric Tons)

	CO2	CH4	N2O	CO2EQ
Annual Operational Emissions	159.0	0.2	0.0	163.1
Annualized Construction Emissions	15.7	0.0	0.0	15.8
Total Annual Emissions	**174.7**	**0.2**	**0.0**	**178.9**

Table 9 shows that the GHG emissions for the project will be about 179 MTCO2EQ per year. This is substantially lower than the SCAQMD Tier 3 screening threshold of 3,000 MTCO2EQ per year. The project emissions are below the SCAQMD threshold of 3,000 MTCO2EQ per year, and therefore, no significant climate change impacts are anticipated.

4.0 MITIGATION MEASURES

4.1 Construction Impacts

During site preparation and grading activities, it was assumed that the site would be watered three times per day. This is a standard requirement of the SCAQMD. Project construction-source air quality modeling assumes watering of the site three times per day during grading activities. Consistent with the construction-source emissions modeling assumptions presented herein, the following Mitigation Measure is incorporated:

> AQ-1: During grading activities, areas that are actively being graded shall be watered a minimum of three times per day.

4.2 Operational Impacts

No air impacts will occur during operation, and therefore, mitigation measures are not needed.

4.3 Climate Change Impacts

Emissions of greenhouse gas are below established thresholds, and therefore, mitigation measures are not needed.

5.0 REFERENCES

"California Emissions Estimator Model (CalEEMod)," online at http://www.caleemod.com

"CEQA, The California Environmental Quality Act, Appendix F, Energy Conservation," http://resources.ca.gov/ceqa/guidelines/Appendix_F.html

"Integrated Energy Policy Report Update," California Energy Commission Staff, 2017.

"Rancho Cucamonga Sustainable Community Action Plan," City of Rancho Cucamonga, April 2017.

"Title 24, Part 6, of the California Code of Regulations. California's Energy Efficiency Standards for Residential and Nonresidential Buildings," State of California http://www.energy.ca.gov/title24/.

APPENDIX

Manning - Banyan Street Homes

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	9.00	Dwelling Unit	2.84	16,200.00	26
Parking Lot	0.87	Acre	0.87	37,897.20	0
City Park	1.47	Acre	1.47	64,033.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actual acreage.

Woodstoves - Each home will have a fireplace. Natural gas only.

Energy Use - Per California requirements, homes will have solar panels that will cover electrical needs.

Construction Off-road Equipment Mitigation -

Energy Mitigation - Solar panels required.

Table Name	Column Name	Default Value	New Value

tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	T24E	951.67	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	7.65	9.00
tblFireplaces	NumberNoFireplace	0.90	0.00
tblFireplaces	NumberWood	0.45	0.00
tblLandUse	LotAcreage	2.92	2.84
tblWoodstoves	NumberCatalytic	0.45	0.00
tblWoodstoves	NumberNoncatalytic	0.45	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9712	40.5510	22.0728	0.0404	18.2675	2.0459	20.3134	9.9840	1.8823	11.8663	0.0000	3,903.2951	3,903.2951	1.1970	0.0000	3,929.7716
2022	5.8390	17.3632	18.2319	0.0360	0.6294	0.8158	1.4452	0.1695	0.7675	0.9370	0.0000	3,485.6100	3,485.6100	0.7178	0.0000	3,501.9631
Maximum	**5.8390**	**40.5510**	**22.0728**	**0.0404**	**18.2675**	**2.0459**	**20.3134**	**9.9840**	**1.8823**	**11.8663**	**0.0000**	**3,903.2951**	**3,903.2951**	**1.1970**	**0.0000**	**3,929.7716**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9712	40.5510	22.0728	0.0404	7.2470	2.0459	9.2930	3.9263	1.8823	5.8086	0.0000	3,903.2951	3,903.2951	1.1970	0.0000	3,929.7716
2022	5.8390	17.3632	18.2319	0.0360	0.6294	0.8158	1.4452	0.1695	0.7675	0.9370	0.0000	3,485.6100	3,485.6100	0.7178	0.0000	3,501.9631
Maximum	**5.8390**	**40.5510**	**22.0728**	**0.0404**	**7.2470**	**2.0459**	**9.2930**	**3.9263**	**1.8823**	**5.8086**	**0.0000**	**3,903.2951**	**3,903.2951**	**1.1970**	**0.0000**	**3,929.7716**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.32**	**0.00**	**50.65**	**59.66**	**0.00**	**47.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4080	0.1579	0.8065	9.9000e-004		0.0162	0.0162		0.0162	0.0162	0.0000	191.9257	191.9257	4.9400e-003	3.4900e-003	193.0905
Energy	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834
Mobile	0.1815	0.8525	2.3832	9.5200e-003	0.8527	6.8800e-003	0.8596	0.2281	6.3900e-003	0.2345		970.9043	970.9043	0.0448		972.0241
Total	**0.5977**	**1.0798**	**3.2193**	**0.0110**	**0.8527**	**0.0287**	**0.8814**	**0.2281**	**0.0282**	**0.2563**	**0.0000**	**1,251.5860**	**1,251.5860**	**0.0514**	**5.1200e-003**	**1,254.3980**

Mitigated Operational

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

Category	lb/day										lb/day					
Area	0.4080	0.1579	0.8065	9.9000e-004		0.0162	0.0162		0.0162	0.0162	0.0000	191.9257	191.9257	4.9400e-003	3.4900e-003	193.0905
Energy	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834
Mobile	0.1815	0.8525	2.3832	9.5200e-003	0.8527	6.8800e-003	0.8596	0.2281	6.3900e-003	0.2345		970.9043	970.9043	0.0448		972.0241
Total	**0.5977**	**1.0798**	**3.2193**	**0.0110**	**0.8527**	**0.0287**	**0.8814**	**0.2281**	**0.0282**	**0.2563**	**0.0000**	**1,251.5860**	**1,251.5860**	**0.0514**	**5.1200e-003**	**1,254.3980**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/28/2021	5	20	
2	Site Preparation	Site Preparation	9/29/2021	10/12/2021	5	10	
3	Grading	Grading	10/13/2021	11/9/2021	5	20	
4	Building Construction	Building Construction	11/10/2021	9/27/2022	5	230	
5	Paving	Paving	9/28/2022	10/25/2022	5	20	
6	Architectural Coating	Architectural Coating	10/26/2022	11/22/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.87

Residential Indoor: 32,805; Residential Outdoor: 10,935; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,274

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38

Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021 (No Demolition)

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		155.3502	155.3502	4.1600e-003		155.4543
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.3502**	**155.3502**	**4.1600e-003**		**155.4543**

Mitigated Construction On-Site

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

Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		155.3502	155.3502	4.1600e-003		155.4543
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.3502**	**155.3502**	**4.1600e-003**		**155.4543**

3.3 Site Preparation - 2021

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.0539	0.6094	1.8700e-003	0.2012	1.4800e-003	0.2027	0.0534	1.3600e-003	0.0547		186.4202	186.4202	5.0000e-003		186.5451
Total	**0.0830**	**0.0539**	**0.6094**	**1.8700e-003**	**0.2012**	**1.4800e-003**	**0.2027**	**0.0534**	**1.3600e-003**	**0.0547**		**186.4202**	**186.4202**	**5.0000e-003**		**186.5451**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**7.0458**	**2.0445**	**9.0903**	**3.8730**	**1.8809**	**5.7539**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.0539	0.6094	1.8700e-003	0.2012	1.4800e-003	0.2027	0.0534	1.3600e-003	0.0547		186.4202	186.4202	5.0000e-003		186.5451
Total	**0.0830**	**0.0539**	**0.6094**	**1.8700e-003**	**0.2012**	**1.4800e-003**	**0.2027**	**0.0534**	**1.3600e-003**	**0.0547**		**186.4202**	**186.4202**	**5.0000e-003**		**186.5451**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		155.3502	155.3502	4.1600e-003		155.4543
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.3502**	**155.3502**	**4.1600e-003**		**155.4543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**2.5554**	**1.1599**	**3.7153**	**1.3133**	**1.0671**	**2.3804**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		155.3502	155.3502	4.1600e-003		155.4543
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**155.3502**	**155.3502**	**4.1600e-003**		**155.4543**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0527	1.7113	0.4559	4.4600e-003	0.1152	3.5700e-003	0.1188	0.0332	3.4100e-003	0.0366		476.1904	476.1904	0.0319		476.9869
Worker	0.2122	0.1379	1.5573	4.7800e-003	0.5142	3.7800e-003	0.5180	0.1364	3.4900e-003	0.1399		476.4072	476.4072	0.0128		476.7264
Total	**0.2649**	**1.8492**	**2.0132**	**9.2400e-003**	**0.6294**	**7.3500e-003**	**0.6367**	**0.1695**	**6.9000e-003**	**0.1764**		**952.5976**	**952.5976**	**0.0446**		**953.7133**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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	0.0527	1.7113	0.4559	4.4600e-003	0.1152	3.5700e-003	0.1188	0.0332	3.4100e-003	0.0366		476.1904	476.1904	0.0319		476.9869
Worker	0.2122	0.1379	1.5573	4.7800e-003	0.5142	3.7800e-003	0.5180	0.1364	3.4900e-003	0.1399		476.4072	476.4072	0.0128		476.7264
Total	**0.2649**	**1.8492**	**2.0132**	**9.2400e-003**	**0.6294**	**7.3500e-003**	**0.6367**	**0.1695**	**6.9000e-003**	**0.1764**		**952.5976**	**952.5976**	**0.0446**		**953.7133**

3.5 Building Construction - 2022

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0495	1.6231	0.4311	4.4200e-003	0.1152	3.0900e-003	0.1183	0.0332	2.9600e-003	0.0361		471.9496	471.9496	0.0307		472.7159
Worker	0.1995	0.1245	1.4374	4.6100e-003	0.5142	3.6800e-003	0.5179	0.1364	3.3900e-003	0.1398		459.3268	459.3268	0.0115		459.6151
Total	**0.2490**	**1.7476**	**1.8685**	**9.0300e-003**	**0.6294**	**6.7700e-003**	**0.6362**	**0.1695**	**6.3500e-003**	**0.1759**		**931.2764**	**931.2764**	**0.0422**		**932.3309**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.0495	1.6231	0.4311	4.4200e-003	0.1152	3.0900e-003	0.1183	0.0332	2.9600e-003	0.0361		471.9496	471.9496	0.0307		472.7159
Worker	0.1995	0.1245	1.4374	4.6100e-003	0.5142	3.6800e-003	0.5179	0.1364	3.3900e-003	0.1398		459.3268	459.3268	0.0115		459.6151

Total	**0.2490**	**1.7476**	**1.8685**	**9.0300e-003**	**0.6294**	**6.7700e-003**	**0.6362**	**0.1695**	**6.3500e-003**	**0.1759**		**931.2764**	**931.2764**	**0.0422**		**932.3309**

3.6 Paving - 2022

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2168**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2168**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

3.7 Architectural Coating - 2022

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	5.5954					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Total	**5.7999**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0390	0.0244	0.2812	9.0000e-004	0.1006	7.2000e-004	0.1013	0.0267	6.6000e-004	0.0273		89.8683	89.8683	2.2600e-003		89.9247
Total	**0.0390**	**0.0244**	**0.2812**	**9.0000e-004**	**0.1006**	**7.2000e-004**	**0.1013**	**0.0267**	**6.6000e-004**	**0.0273**		**89.8683**	**89.8683**	**2.2600e-003**		**89.9247**

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	5.5954					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**5.7999**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0390	0.0244	0.2812	9.0000e-004	0.1006	7.2000e-004	0.1013	0.0267	6.6000e-004	0.0273		89.8683	89.8683	2.2600e-003		89.9247
Total	**0.0390**	**0.0244**	**0.2812**	**9.0000e-004**	**0.1006**	**7.2000e-004**	**0.1013**	**0.0267**	**6.6000e-004**	**0.0273**		**89.8683**	**89.8683**	**2.2600e-003**		**89.9247**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1815	0.8525	2.3832	9.5200e-003	0.8527	6.8800e-003	0.8596	0.2281	6.3900e-003	0.2345		970.9043	970.9043	0.0448		972.0241
Unmitigated	0.1815	0.8525	2.3832	9.5200e-003	0.8527	6.8800e-003	0.8596	0.2281	6.3900e-003	0.2345		970.9043	970.9043	0.0448		972.0241

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2.78	33.44	24.61	29,574	29,574
Parking Lot	0.00	0.00	0.00		
Single Family Housing	85.68	89.19	77.58	290,541	290,541
Total	88.46	122.63	102.19	320,115	320,115

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Parking Lot	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Single Family Housing	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834
NaturalGas Unmitigated	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834

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					
City Park	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
Parking Lot	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
Single Family Housing	754.426	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834
Total		**8.1400e-003**	**0.0695**	**0.0296**	**4.4000e-004**		**5.6200e-003**	**5.6200e-003**		**5.6200e-003**	**5.6200e-003**		**88.7560**	**88.7560**	**1.7000e-003**	**1.6300e-003**	**89.2834**

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					
City Park	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
Parking Lot	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
Single Family Housing	0.754426	8.1400e-003	0.0695	0.0296	4.4000e-004		5.6200e-003	5.6200e-003		5.6200e-003	5.6200e-003		88.7560	88.7560	1.7000e-003	1.6300e-003	89.2834
Total		**8.1400e-003**	**0.0695**	**0.0296**	**4.4000e-004**		**5.6200e-003**	**5.6200e-003**		**5.6200e-003**	**5.6200e-003**		**88.7560**	**88.7560**	**1.7000e-003**	**1.6300e-003**	**89.2834**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4080	0.1579	0.8065	9.9000e-004		0.0162	0.0162		0.0162	0.0162	0.0000	191.9257	191.9257	4.9400e-003	3.4900e-003	193.0905
Unmitigated	0.4080	0.1579	0.8065	9.9000e-004		0.0162	0.0162		0.0162	0.0162	0.0000	191.9257	191.9257	4.9400e-003	3.4900e-003	193.0905

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0175	0.1493	0.0635	9.5000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	190.5882	190.5882	3.6500e-003	3.4900e-003	191.7208
Landscaping	0.0224	8.5600e-003	0.7429	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003		1.3375	1.3375	1.2900e-003		1.3697
Total	**0.4080**	**0.1579**	**0.8065**	**9.9000e-004**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**191.9257**	**191.9257**	**4.9400e-003**	**3.4900e-003**	**193.0905**

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	0.0307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3375					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0175	0.1493	0.0635	9.5000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	190.5882	190.5882	3.6500e-003	3.4900e-003	191.7208
Landscaping	0.0224	8.5600e-003	0.7429	4.0000e-005		4.1100e-003	4.1100e-003		4.1100e-003	4.1100e-003		1.3375	1.3375	1.2900e-003		1.3697
Total	**0.4080**	**0.1579**	**0.8065**	**9.9000e-004**		**0.0162**	**0.0162**		**0.0162**	**0.0162**	**0.0000**	**191.9257**	**191.9257**	**4.9400e-003**	**3.4900e-003**	**193.0905**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

Manning - Banyan Street Homes

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	9.00	Dwelling Unit	2.84	16,200.00	26
Parking Lot	0.87	Acre	0.87	37,897.20	0
City Park	1.47	Acre	1.47	64,033.20	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actual acreage.

Woodstoves - Each home will have a fireplace. Natural gas only.

Energy Use - Per California requirements, homes will have solar panels that will cover electrical needs.

Construction Off-road Equipment Mitigation -

Energy Mitigation - Solar panels required.

Table Name	Column Name	Default Value	New Value

tblEnergyUse	LightingElect	1,608.84	0.00
tblEnergyUse	NT24E	6,155.97	0.00
tblEnergyUse	T24E	951.67	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	7.65	9.00
tblFireplaces	NumberNoFireplace	0.90	0.00
tblFireplaces	NumberWood	0.45	0.00
tblLandUse	LotAcreage	2.92	2.84
tblWoodstoves	NumberCatalytic	0.45	0.00
tblWoodstoves	NumberNoncatalytic	0.45	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1164	1.1325	0.8472	1.6100e-003	0.1719	0.0557	0.2276	0.0876	0.0518	0.1394	0.0000	141.2128	141.2128	0.0349	0.0000	142.0846
2022	0.2568	1.7959	1.9238	3.7500e-003	0.0620	0.0848	0.1468	0.0167	0.0797	0.0964	0.0000	329.7544	329.7544	0.0636	0.0000	331.3439
Maximum	**0.2568**	**1.7959**	**1.9238**	**3.7500e-003**	**0.1719**	**0.0848**	**0.2276**	**0.0876**	**0.0797**	**0.1394**	**0.0000**	**329.7544**	**329.7544**	**0.0636**	**0.0000**	**331.3439**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1164	1.1325	0.8472	1.6100e-003	0.0768	0.0557	0.1325	0.0368	0.0518	0.0886	0.0000	141.2126	141.2126	0.0349	0.0000	142.0845
2022	0.2568	1.7959	1.9238	3.7500e-003	0.0620	0.0848	0.1468	0.0167	0.0797	0.0964	0.0000	329.7541	329.7541	0.0636	0.0000	331.3436
Maximum	**0.2568**	**1.7959**	**1.9238**	**3.7500e-003**	**0.0768**	**0.0848**	**0.1468**	**0.0368**	**0.0797**	**0.0964**	**0.0000**	**329.7541**	**329.7541**	**0.0636**	**0.0000**	**331.3436**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.65**	**0.00**	**25.39**	**48.72**	**0.00**	**21.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2021**	**11-30-2021**	1.0020	1.0020
2	**12-1-2021**	**2-28-2022**	0.6445	0.6445
3	**3-1-2022**	**5-31-2022**	0.6342	0.6342
4	**6-1-2022**	**8-31-2022**	0.6340	0.6340
5	**9-1-2022**	**9-30-2022**	0.1994	0.1994
		Highest	1.0020	1.0020

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	0.0702	2.9400e-003	0.0937	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	2.3129	2.3129	1.9000e-004	4.0000e-005	2.3294
Energy	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	18.9207	18.9207	4.6000e-004	3.1000e-004	19.0232
Mobile	0.0254	0.1243	0.3505	1.4000e-003	0.1216	9.9000e-004	0.1226	0.0326	9.2000e-004	0.0335	0.0000	129.6288	129.6288	5.8400e-003	0.0000	129.7749
Waste						0.0000	0.0000		0.0000	0.0000	2.1903	0.0000	2.1903	0.1294	0.0000	5.4263

Water						0.0000	0.0000		0.0000	0.0000	0.1860	9.9414	10.1275	0.0195	5.4000e-004	10.7752
Total	**0.0971**	**0.1399**	**0.4496**	**1.5000e-003**	**0.1216**	**2.6800e-003**	**0.1243**	**0.0326**	**2.6100e-003**	**0.0352**	**2.3763**	**160.8039**	**163.1802**	**0.1555**	**8.9000e-004**	**167.3289**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0702	2.9400e-003	0.0937	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	2.3129	2.3129	1.9000e-004	4.0000e-005	2.3294
Energy	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.6945	14.6945	2.8000e-004	2.7000e-004	14.7819
Mobile	0.0254	0.1243	0.3505	1.4000e-003	0.1216	9.9000e-004	0.1226	0.0326	9.2000e-004	0.0335	0.0000	129.6288	129.6288	5.8400e-003	0.0000	129.7749
Waste						0.0000	0.0000		0.0000	0.0000	2.1903	0.0000	2.1903	0.1294	0.0000	5.4263
Water						0.0000	0.0000		0.0000	0.0000	0.1860	9.9414	10.1275	0.0195	5.4000e-004	10.7752
Total	**0.0971**	**0.1399**	**0.4496**	**1.5000e-003**	**0.1216**	**2.6800e-003**	**0.1243**	**0.0326**	**2.6100e-003**	**0.0352**	**2.3763**	**156.5777**	**158.9540**	**0.1553**	**8.5000e-004**	**163.0876**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.63**	**2.59**	**0.12**	**4.49**	**2.53**

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	9/1/2021	9/28/2021	5	20	
2	Site Preparation	Site Preparation	9/29/2021	10/12/2021	5	10	
3	Grading	Grading	10/13/2021	11/9/2021	5	20	
4	Building Construction	Building Construction	11/10/2021	9/27/2022	5	230	

5	Paving	Paving	9/28/2022	10/25/2022	5	20	
6	Architectural Coating	Architectural Coating	10/26/2022	11/22/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0.87

Residential Indoor: 32,805; Residential Outdoor: 10,935; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,274

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	46.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

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	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**		**0.0155**	**0.0155**		**0.0144**	**0.0144**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4335	1.4335	4.0000e-005	0.0000	1.4345
Total	**6.3000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4335**	**1.4335**	**4.0000e-005**	**0.0000**	**1.4345**

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	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**		**0.0155**	**0.0155**		**0.0144**	**0.0144**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4335	1.4335	4.0000e-005	0.0000	1.4345
Total	**6.3000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4335**	**1.4335**	**4.0000e-005**	**0.0000**	**1.4345**

3.3 Site Preparation - 2021

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.8000e-004	3.1400e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8601	0.8601	2.0000e-005	0.0000	0.8607
Total	**3.8000e-004**	**2.8000e-004**	**3.1400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8601**	**0.8601**	**2.0000e-005**	**0.0000**	**0.8607**

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0352**	**0.0102**	**0.0455**	**0.0194**	**9.4000e-003**	**0.0288**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.8000e-004	3.1400e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8601	0.8601	2.0000e-005	0.0000	0.8607
Total	**3.8000e-004**	**2.8000e-004**	**3.1400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8601**	**0.8601**	**2.0000e-005**	**0.0000**	**0.8607**

3.4 Grading - 2021

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0443**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4335	1.4335	4.0000e-005	0.0000	1.4345
Total	**6.3000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4335**	**1.4335**	**4.0000e-005**	**0.0000**	**1.4345**

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					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0256**	**0.0116**	**0.0372**	**0.0131**	**0.0107**	**0.0238**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

Mitigated Construction Off-Site

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

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	4.6000e-004	5.2300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4335	1.4335	4.0000e-005	0.0000	1.4345
Total	**6.3000e-004**	**4.6000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4335**	**1.4335**	**4.0000e-005**	**0.0000**	**1.4345**

3.5 Building Construction - 2021

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	0.0361	0.3312	0.3149	5.1000e-004		0.0182	0.0182		0.0171	0.0171	0.0000	44.0111	44.0111	0.0106	0.0000	44.2765
Total	**0.0361**	**0.3312**	**0.3149**	**5.1000e-004**		**0.0182**	**0.0182**		**0.0171**	**0.0171**	**0.0000**	**44.0111**	**44.0111**	**0.0106**	**0.0000**	**44.2765**

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	9.7000e-004	0.0331	8.2000e-003	9.0000e-005	2.1600e-003	7.0000e-005	2.2200e-003	6.2000e-004	6.0000e-005	6.9000e-004	0.0000	8.3498	8.3498	5.3000e-004	0.0000	8.3630
Worker	3.6400e-003	2.6900e-003	0.0305	9.0000e-005	9.5900e-003	7.0000e-005	9.6600e-003	2.5500e-003	7.0000e-005	2.6100e-003	0.0000	8.3525	8.3525	2.2000e-004	0.0000	8.3581

Total	**4.6100e-003**	**0.0358**	**0.0387**	**1.8000e-004**	**0.0118**	**1.4000e-004**	**0.0119**	**3.1700e-003**	**1.3000e-004**	**3.3000e-003**	**0.0000**	**16.7023**	**16.7023**	**7.5000e-004**	**0.0000**	**16.7211**

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	0.0361	0.3312	0.3149	5.1000e-004		0.0182	0.0182		0.0171	0.0171	0.0000	44.0110	44.0110	0.0106	0.0000	44.2765
Total	**0.0361**	**0.3312**	**0.3149**	**5.1000e-004**		**0.0182**	**0.0182**		**0.0171**	**0.0171**	**0.0000**	**44.0110**	**44.0110**	**0.0106**	**0.0000**	**44.2765**

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	9.7000e-004	0.0331	8.2000e-003	9.0000e-005	2.1600e-003	7.0000e-005	2.2200e-003	6.2000e-004	6.0000e-005	6.9000e-004	0.0000	8.3498	8.3498	5.3000e-004	0.0000	8.3630
Worker	3.6400e-003	2.6900e-003	0.0305	9.0000e-005	9.5900e-003	7.0000e-005	9.6600e-003	2.5500e-003	7.0000e-005	2.6100e-003	0.0000	8.3525	8.3525	2.2000e-004	0.0000	8.3581
Total	**4.6100e-003**	**0.0358**	**0.0387**	**1.8000e-004**	**0.0118**	**1.4000e-004**	**0.0119**	**3.1700e-003**	**1.3000e-004**	**3.3000e-003**	**0.0000**	**16.7023**	**16.7023**	**7.5000e-004**	**0.0000**	**16.7211**

3.5 Building Construction - 2022

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	0.1638	1.4991	1.5709	2.5900e-003		0.0777	0.0777		0.0731	0.0731	0.0000	222.4562	222.4562	0.0533	0.0000	223.7886
Total	**0.1638**	**1.4991**	**1.5709**	**2.5900e-003**		**0.0777**	**0.0777**		**0.0731**	**0.0731**	**0.0000**	**222.4562**	**222.4562**	**0.0533**	**0.0000**	**223.7886**

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	4.6100e-003	0.1585	0.0392	4.3000e-004	0.0109	2.9000e-004	0.0112	3.1400e-003	2.8000e-004	3.4200e-003	0.0000	41.8171	41.8171	2.5700e-003	0.0000	41.8813
Worker	0.0173	0.0123	0.1421	4.5000e-004	0.0485	3.5000e-004	0.0488	0.0129	3.3000e-004	0.0132	0.0000	40.6889	40.6889	1.0200e-003	0.0000	40.7144
Total	**0.0219**	**0.1708**	**0.1813**	**8.8000e-004**	**0.0593**	**6.4000e-004**	**0.0600**	**0.0160**	**6.1000e-004**	**0.0166**	**0.0000**	**82.5060**	**82.5060**	**3.5900e-003**	**0.0000**	**82.5957**

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	0.1638	1.4991	1.5709	2.5900e-003		0.0777	0.0777		0.0731	0.0731	0.0000	222.4560	222.4560	0.0533	0.0000	223.7883
Total	**0.1638**	**1.4991**	**1.5709**	**2.5900e-003**		**0.0777**	**0.0777**		**0.0731**	**0.0731**	**0.0000**	**222.4560**	**222.4560**	**0.0533**	**0.0000**	**223.7883**

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	4.6100e-003	0.1585	0.0392	4.3000e-004	0.0109	2.9000e-004	0.0112	3.1400e-003	2.8000e-004	3.4200e-003	0.0000	41.8171	41.8171	2.5700e-003	0.0000	41.8813
Worker	0.0173	0.0123	0.1421	4.5000e-004	0.0485	3.5000e-004	0.0488	0.0129	3.3000e-004	0.0132	0.0000	40.6889	40.6889	1.0200e-003	0.0000	40.7144
Total	**0.0219**	**0.1708**	**0.1813**	**8.8000e-004**	**0.0593**	**6.4000e-004**	**0.0600**	**0.0160**	**6.1000e-004**	**0.0166**	**0.0000**	**82.5060**	**82.5060**	**3.5900e-003**	**0.0000**	**82.5957**

3.6 Paving - 2022

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0122**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**5.9000e-004**	**4.2000e-004**	**4.8300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3821**	**1.3821**	**3.0000e-005**	**0.0000**	**1.3830**

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0122**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**5.9000e-004**	**4.2000e-004**	**4.8300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3821**	**1.3821**	**3.0000e-005**	**0.0000**	**1.3830**

3.7 Architectural Coating - 2022

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	0.0560					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0580**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.9000e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8293	0.8293	2.0000e-005	0.0000	0.8298
Total	**3.5000e-004**	**2.5000e-004**	**2.9000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8293**	**0.8293**	**2.0000e-005**	**0.0000**	**0.8298**

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	0.0560					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0580**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.9000e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8293	0.8293	2.0000e-005	0.0000	0.8298
Total	**3.5000e-004**	**2.5000e-004**	**2.9000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8293**	**0.8293**	**2.0000e-005**	**0.0000**	**0.8298**

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	0.0254	0.1243	0.3505	1.4000e-003	0.1216	9.9000e-004	0.1226	0.0326	9.2000e-004	0.0335	0.0000	129.6288	129.6288	5.8400e-003	0.0000	129.7749
Unmitigated	0.0254	0.1243	0.3505	1.4000e-003	0.1216	9.9000e-004	0.1226	0.0326	9.2000e-004	0.0335	0.0000	129.6288	129.6288	5.8400e-003	0.0000	129.7749

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	2.78	33.44	24.61	29,574	29,574
Parking Lot	0.00	0.00	0.00		
Single Family Housing	85.68	89.19	77.58	290,541	290,541
Total	88.46	122.63	102.19	320,115	320,115

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Parking Lot	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Single Family Housing	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.2262	4.2262	1.7000e-004	4.0000e-005	4.2413
NaturalGas Mitigated	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.6945	14.6945	2.8000e-004	2.7000e-004	14.7819
NaturalGas Unmitigated	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.6945	14.6945	2.8000e-004	2.7000e-004	14.7819

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					
City Park	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
Parking Lot	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
Single Family Housing	275365	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.6945	14.6945	2.8000e-004	2.7000e-004	14.7819
Total		**1.4800e-003**	**0.0127**	**5.4000e-003**	**8.0000e-005**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**14.6945**	**14.6945**	**2.8000e-004**	**2.7000e-004**	**14.7819**

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					
City Park	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
Parking Lot	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
Single Family Housing	275365	1.4800e-003	0.0127	5.4000e-003	8.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	14.6945	14.6945	2.8000e-004	2.7000e-004	14.7819
Total		**1.4800e-003**	**0.0127**	**5.4000e-003**	**8.0000e-005**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**14.6945**	**14.6945**	**2.8000e-004**	**2.7000e-004**	**14.7819**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	13264	4.2262	1.7000e-004	4.0000e-005	4.2413
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**4.2262**	**1.7000e-004**	**4.0000e-005**	**4.2413**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0702	2.9400e-003	0.0937	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	2.3129	2.3129	1.9000e-004	4.0000e-005	2.3294
Unmitigated	0.0702	2.9400e-003	0.0937	2.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	2.3129	2.3129	1.9000e-004	4.0000e-005	2.3294

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	5.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2000e-004	1.8700e-003	7.9000e-004	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1612	2.1612	4.0000e-005	4.0000e-005	2.1741

Landscaping	2.8000e-003	1.0700e-003	0.0929	0.0000		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	0.1517	0.1517	1.5000e-004	0.0000	0.1553
Total	**0.0702**	**2.9400e-003**	**0.0937**	**1.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**2.3129**	**2.3129**	**1.9000e-004**	**4.0000e-005**	**2.3294**

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	5.6000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2000e-004	1.8700e-003	7.9000e-004	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1612	2.1612	4.0000e-005	4.0000e-005	2.1741
Landscaping	2.8000e-003	1.0700e-003	0.0929	0.0000		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	0.1517	0.1517	1.5000e-004	0.0000	0.1553
Total	**0.0702**	**2.9400e-003**	**0.0937**	**1.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**2.3129**	**2.3129**	**1.9000e-004**	**4.0000e-005**	**2.3294**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.1275	0.0195	5.4000e-004	10.7752
Unmitigated	10.1275	0.0195	5.4000e-004	10.7752

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.75148	6.2000	2.6000e-004	5.0000e-005	6.2222
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.586386 / 0.369678	3.9274	0.0193	4.8000e-004	4.5530
Total		**10.1275**	**0.0195**	**5.3000e-004**	**10.7752**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 1.75148	6.2000	2.6000e-004	5.0000e-005	6.2222
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.586386 / 0.369678	3.9274	0.0193	4.8000e-004	4.5530
Total		**10.1275**	**0.0195**	**5.3000e-004**	**10.7752**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.1903	0.1294	0.0000	5.4263
Unmitigated	2.1903	0.1294	0.0000	5.4263

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.13	0.0264	1.5600e-003	0.0000	0.0654
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	10.66	2.1639	0.1279	0.0000	5.3609
Total		**2.1903**	**0.1294**	**0.0000**	**5.4263**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
City Park	0.13	0.0264	1.5600e-003	0.0000	0.0654
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	10.66	2.1639	0.1279	0.0000	5.3609
Total		**2.1903**	**0.1294**	**0.0000**	**5.4263**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation