

Small Project Analysis Level Assessment

**Renfro Road & Santa Fe Way
Light Industrial Project
APNs 529-012-37**

Prepared by:



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EXECUTIVE SUMMARY

Insight Environmental Consultants, Inc., *a Trinity Consultants Company*, has completed a limited air quality assessment for a light industrial project to be located on APN 529-012-37 (Project). The Project includes the construction of up to 38,000 square feet (SF) of light industrial building and repurposing 12,000 SF of existing buildings for a Project total of 50,000 SF. The Project is located in the City of Bakersfield at the intersection of Renfro Road and Santa Fe Way.

This limited air quality assessment uses the San Joaquin Valley Air Pollution Control District's (SJVAPCD) screening tool, Small Project Analysis Level (SPAL) (SJVAPCD 2012). This SPAL assessment was prepared pursuant to the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD 2015), the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

STATEMENT OF FINDING

Based on the SPAL established by the SJVAPCD's GAMAQI, the emissions estimates prepared pursuant to this SPAL assessment do not exceed the SJVAPCD's established emissions thresholds and significance thresholds for all CEQA air quality determinations; this Project would therefore *not pose a significant impact* to the San Joaquin Valley Air Basin and would have a *less than significant air quality impact*.

1.0 INTRODUCTION

The proposed Project includes the construction of up to 38,000 square feet (SF) of light industrial building and repurposing 12,000 SF of existing buildings for a Project total of 50,000 SF.

The Project site is located within the City of Bakersfield, California at the northwest corner of Renfro Road and Santa Fe Way. The Project was assessed as if it would be developed in one phase. This assessment examines the projected gross impacts to air quality posed by this Project to the San Joaquin Valley Air Basin to determine whether or not the Project remains below established air quality thresholds of significance.

2.0 GENERAL PROJECT DESCRIPTION

The Project is located in the City of Bakersfield, California at the northwest corner of Renfro Road and Santa Fe Way. **Figure 2-1** depicts the Project location within the City of Bakersfield.



Figure 2-1 -Location in Bakersfield, CA

3.0 SMALL PROJECT ANALYSIS LEVEL QUALIFICATION

This assessment was prepared pursuant to the SJVAPCD's GAMAQI (SJVAPCD 2015), the CEQA (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387). The SJVAPCD created the screening tool, SPAL, to streamline air quality assessments of commonly encountered projects. According to GAMAQI, the SJVAPCD “pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding emissions thresholds”¹.

¹ SJVAPCD GAMAQI, Section 8.3.4, Page 85.

The SJVAPCD SPAL process established review parameters to determine whether a project qualifies as a “small project.” A project that is found to be “less than” the established parameters, according to the SPAL review parameters, has “no possibility of exceeding criteria pollutant emissions thresholds.” **Table 3-1** presents the SPAL size parameters for industrial projects.

Table 3-1 Small Project Analysis Level in Square Feet for Industrial

Land Use Category - Industrial	Project Size (SF)*
General Light Industry	510,000
Heavy Industry	920,000
Industrial Park	370,000
Manufacturing	400,000
Proposed Project	50,000
SPAL Exceeded?	No

Notes:
 * Project size based on SPAL Table 5-3(d), as posted on SJVAPCD webpage:
<https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf>

As shown in **Table 3-1**, the proposed Project would not exceed the established SPAL limits for a General Light Industrial project. The Project would consist of 50,000 SF of general light industrial buildings compared to the allowable project size for a general light industrial project which is 510,000 SF. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

Table 3-2 presents the SPAL vehicle trip parameters for projects.

Table 3-2 Small Project Analysis Level in Vehicle Trips

Land Use Category	Project Size (trips/day)*
Residential Housing	1,453
Commercial	1,673
Office	1,628
Institutional	1,707
Industrial	1,506
Proposed Project	125
SPAL Exceeded?	No

Notes:
 * Project size based on SPAL Table 5-3(d), as posted on SJVAPCD webpage:
<https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf>

As shown in **Table 3-2**, the proposed Project would not exceed the established SPAL vehicle trip limits for General Light Industrial project. The Project would generate 125 average daily trips compared to the allowable project vehicle trips for a general light industrial project which is 1,506 average daily trips. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

4.0 AIR QUALITY IMPACTS AND EVALUATION

Significance thresholds are based on the CEQA Appendix G Environmental Checklist Form (not included herein) and SJVAPCD air quality thresholds (SJVAPCD 2015). A potentially significant impact to air quality, as defined by the CEQA Checklist, would occur if the project caused one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan;

- Violation of any air quality standard or substantial contribution to an existing or projected air quality standard;
- A cumulatively considerable net increase of any criteria pollutant for which the project region is designated non-attainment under an applicable Federal or state ambient air quality standard (including emissions which exceed quantitative thresholds for ozone precursors);
- Exposure of sensitive receptors to substantial pollutant concentrations; and/or
- The creation of objectionable odors affecting a substantial number of people.

The SJVAPCD has identified quantitative emission thresholds to determine whether the potential air quality impacts of a project require analysis in an Environmental Impact Report. The SJVAPCD air quality thresholds from the GAMAQI are presented in **Table 4-1** (SJVAPCD 2015). The SJVAPCD separates construction emissions from operational emissions for determining significance thresholds for air pollutant emissions.

Table 4-1 SJVAPCD Air Quality Thresholds of Significance – Criteria Pollutants

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
		Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15

Source: SJVAPCD 2015

Criteria pollutant) emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 (California Air Pollution Control Officers Association (CAPCOA) 2013). This project would generate short-term construction emissions and long-term operational emissions.

An air quality evaluation also considers: 1) exposure of sensitive receptors to substantial pollutant concentrations; and 2) the creation of objectionable odors affecting a substantial number of people. The criteria for this evaluation are based on the Lead Agency's determination of the proximity of the proposed Project and the sensitive receptors. A sensitive receptor is a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors.

5.0 PROJECT-RELATED EMISSIONS

This document was prepared pursuant to the SJVAPCD's GAMAQI and SPAL guidelines and provides a cursory review of the Project emissions to demonstrate that it would not exceed established air quality emissions thresholds.

5.1 Short-Term Emissions

Table 5-1 shows the construction emission levels using default CalEEMod factors for construction of 38,000 SF industrial project (see **Attachment A**) except for the following:

- Project site acres was changed from the default to the actual acreage of the Project site.

Construction emission estimates also included the following SJVAPCD's required measures for all projects:

- Water exposed area 3 times per day; and
- Reduce vehicle speed to less than 15 miles per hour.

Based on these anticipated activity levels, the Project construction activities would not exceed construction thresholds (**Table 4-1**). Construction emissions therefore were found to be *less than significant* and no further evaluation is required.

Table 5-1 – Construction Emission Levels

Emissions Source	Pollutant					
	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
	(tons/year)					
2019 Construction Emissions	0.32	3.01	2.24	0.004	0.25	0.20
2020 Construction Emissions	0.41	0.53	0.50	0.001	0.04	0.03
SJVAPCD Operational Emissions Thresholds – non-permitted sources	10	10	100	27	15	15
Is Threshold Exceeded?	No	No	No	No	No	No

5.2 Long-Term Emissions

Table 5-2 presents the Project's long-term operations emissions generated from mobile, energy and area sources as well as from water use and waste generation emissions. Most of these emissions impacts are from mobile sources traveling to and from the Project area. The following changes to default values were incorporated during the CalEEMod analysis:

- Trip rate was changed to match the traffic study data of 125 average daily trips per day.

Operational emission estimates also included the following mitigation measures even though the Project was less than significant *before* mitigation:

- Improve walkability design;
- Improve destination accessibility; and
- Use electric lawnmower, leaf blower, and chainsaw (3% per SJVAPCD).

Table 5-2 - Total Project Operational Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Unmitigated						
Operational Emissions	0.29	0.78	0.61	0.003	0.15	0.05
SJVAPCD Operational Emissions Thresholds – non-permitted sources	10	10	100	27	15	15
Is Threshold Exceeded Before Mitigation?	No	No	No	No	No	No
Mitigated						
Operational Emissions	0.29	0.68	0.48	0.002	0.11	0.03
SJVAPCD Operational Emissions Thresholds – non-permitted sources	10	10	100	27	15	15
Is Threshold Exceeded Before Mitigation?	No	No	No	No	No	No

As calculated (see **Attachment A**), the long-term operational (mobile) emissions associated with the proposed Project would be less than SJVAPCD significance threshold levels and would, therefore, *not pose a significant impact to criteria air pollutants*. This finding is consistent with the SPAL screening thresholds.

5.3 Greenhouse Gas Emissions

The Project's greenhouse gas (GHG) emissions are primarily from mobile source activities. Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified as carbon dioxide equivalents (CO₂e) (see **Attachment A**). The proposed Project's operational CO₂e emissions were estimated using CalEEMod. These emissions are summarized in **Table 5-3**.

Table 5-3 - Estimated Annual Greenhouse Gas Emissions

	CO ₂ Emissions metric tons	CH ₄ Emissions metric tons	N ₂ O Emissions metric tons	CO ₂ e Emissions metric tons
2020 Project Operations	413.33	1.146	0.011	445.35
2005 BAU	505.58	1.224	0.011	539.54
BAU less Project emissions				17.5%

The current inventory and forecast for GHG emissions in the California Air Resources Board's 2014 First Update to the Climate Change Scoping Plan supports the recent changes to IPPC's 2011 estimates by calculating global warming potentials (GWP) of the various GHGs. CARB now uses GWPs in its climate change programs and to estimate the various impacts. Using the IPCC's Fourth Assessment Report, CARB has recalculated the 1990 GHG emissions level to be 431MMTCO₂e. Therefore, the 2020 emissions limit established in response to AB32 is now slightly higher than the 427MMTCO₂e that was identified in the initial Scoping Plan. It is widely understood that climate change is a "global" issue and, as such, GHG emissions are a cumulative problem and can only be evaluated as such.

The amount of CO₂ that would be generated by the Project is so small in relation to the California CO₂ equivalent estimates for 2020 that it's not possible for the contribution of the Project to be cumulatively considerable. The project GHG emissions are less than the 2005 business as usual emissions for the project by 94.19 metric tons CO₂e. Therefore, the Project would not generate a cumulatively considerable GHG impact nor would it conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The Project will also not conflict with any elements of the California Air Resources Board's 2014 Update to the Climate Change Scoping Plan. Therefore, this potential impact is *less than significant*.

5.4 Potential Impact on Sensitive Receptors

The proposed Project is located at the northwest corner of Renfro Road and Santa Fe Way. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. The closest schools are Frontier High School at 0.7 miles to the northeast, Veterans Elementary School at 1.2 miles to the northeast, Freedom Middle School at 1.32 miles to the east, and Rosedale North Elementary School at 1.92 miles to the southeast. There are no other known schools, hospitals, or nursing homes within a two mile radius of the Project.

Based on the predicted operational emissions and activity types, the proposed Project is not expected to affect sensitive receptors and is *not expected to have any adverse impacts on any known sensitive receptor.*

5.5 Potential Impacts to Visibility to Nearby Class 1 Areas

It should be noted that visibility impact analyses are not usually conducted for area sources. The recommended analysis methodology was initially intended for stationary sources of emissions which were subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60. Since the Project's emissions are predicted to be significantly less than the PSD threshold levels, an impact at either the Dome Land Wilderness or the Sequoia National Park Areas (the two nearest Class 1 areas to the Project) is extremely unlikely. Therefore, based on the Project's predicted emissions, the Project is *not expected to have any adverse impact to visibility at any Class 1 Area.*

5.6 Potential Odor Impacts

The proposed Project is a light industrial project located near residential neighborhoods. Expected uses are not known to be a source of nuisance odors and are not listed in Table 6 of the SJVAPCD's GAMAQI. The Project is therefore not anticipated to have substantial odor impacts. The Project is therefore anticipated to have a *less than significant odor impact.*

5.7 Ambient Air Quality Impacts

In Table 4 of GAMAQI (2015, p 95), SJVAPCD has developed SPAL screening thresholds for Ambient Air Quality Analyses (AAQA). GAMAQI lists 25,000 SF as the ambient air quality exemption level for light industrial projects, however, it further states that "All projects on the exemption list emit less than 2 tons per year of either PM10 or NOx". The proposed Project consists of 50,000 SF but emits less than 1 ton per year of PM10 and NOx. GAMAQI concludes that Projects with less than 2 tons per year of PM10 and NOx will have a less than significant impact on air quality and no AAQA is required. The proposed Project's AAQA impacts would therefore be *less than significant* and no further impact analysis is required.

5.8 Toxic Air Contaminant (TAC) Impacts

TACs, as defined by the California Health & Safety Code (CH&SC) §44321, are listed in Appendices AI and AII in AB 2588 Air Toxic "Hot Spots" and Assessment Act's Emissions Inventory Criteria and Guideline Regulation document. SJVAPCD's risk management objectives for permitting and CEQA are as follows:

- Minimize health risks from new and modified sources of air pollution.

- Health risks from new and modified sources shall not be significant relative to the background risk levels and other risk levels that are typically accepted throughout the community.
- Avoid unreasonable restrictions on permitting.

The proposed Project is a light industrial project with small light industrial facilities and is not expected to generate any TAC emissions. The Project would therefore not generate a health risk impact due to TAC emissions. Its potential health risk impacts would therefore be considered *less than significant* and no further health risk assessment is required.

6.0 CONCLUSIONS

Based on the criteria established by the SJVAPCD's GAMAQI and SPAL guidelines, the proposed Project does not meet the minimum standards to require a full Air Quality Impact Analysis. Furthermore, the Project as proposed would not exceed the SJVAPCD's criteria air pollutant emission levels and would generate *less than significant air quality impacts*.

7.0 ATTACHMENTS

A. CalEEMod Emissions Estimates Output Files

8.0 REFERENCES

- California Environmental Protection Agency, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments, August 2003.
- California Environmental Quality Act (CEQA). 2012. (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).
- , 2009. CEQA, Appendix G – Environmental Checklist Form, Final Text.
- California Air Pollution Control Officers Association (CAPCOA). 2013. California Emissions Estimator Model tm (CalEEMod), version 2013.2.2.
- , 1997. "Air Toxics Hot Spots" Program Risk Assessment Guidelines, Revised 1992.
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009.
- , 2012. *Small Project Analysis Level*. June 2012.
- , 2015. Guide for Assessing and Mitigating Air Quality Impacts.

ATTACHMENT A - CalEEMod Emissions Estimates Output Files

Renfro & Santa Fe Light Industrial - Kern-San Joaquin County, Annual

Renfro & Santa Fe Light Industrial
Kern-San Joaquin County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	50.00	1000sqft	8.53	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	3			Operational Year	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	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 Project Acreage

Vehicle Trips - ADTs adjusted to match traffic study data of 125 ADTs.

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LotAcreage	1.15	8.53
tblVehicleTrips	ST_TR	1.32	2.50
tblVehicleTrips	SU_TR	0.68	2.50
tblVehicleTrips	WD_TR	6.97	2.50

2.0 Emissions Summary

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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					
2019	0.3245	3.0139	2.2412	3.9000e-003	0.1805	0.1693	0.3497	0.0900	0.1585	0.2484	0.0000	345.1117	345.1117	0.0811	0.0000	347.1390	
2020	0.4057	0.5321	0.4950	8.5000e-004	5.6500e-003	0.0294	0.0351	1.5200e-003	0.0276	0.0291	0.0000	73.7777	73.7777	0.0176	0.0000	74.2168	
Maximum	0.4057	3.0139	2.2412	3.9000e-003	0.1805	0.1693	0.3497	0.0900	0.1585	0.2484	0.0000	345.1117	345.1117	0.0811	0.0000	347.1390	

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					
2019	0.3245	3.0139	2.2412	3.9000e-003	0.0854	0.1693	0.2547	0.0392	0.1585	0.1976	0.0000	345.1113	345.1113	0.0811	0.0000	347.1386	
2020	0.4057	0.5321	0.4950	8.5000e-004	5.6500e-003	0.0294	0.0351	1.5200e-003	0.0276	0.0291	0.0000	73.7776	73.7776	0.0176	0.0000	74.2168	
Maximum	0.4057	3.0139	2.2412	3.9000e-003	0.0854	0.1693	0.2547	0.0392	0.1585	0.1976	0.0000	345.1113	345.1113	0.0811	0.0000	347.1386	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.08	0.00	24.70	55.55	0.00	18.31	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-25-2019	4-24-2019	1.1312	1.1312
2	4-25-2019	7-24-2019	0.8025	0.8025
3	7-25-2019	10-24-2019	0.8115	0.8115
4	10-25-2019	1-24-2020	0.7926	0.7926
5	1-25-2020	4-24-2020	0.7390	0.7390
		Highest	1.1312	1.1312

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	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004	
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	183.9771	183.9771	6.8700e-003	2.2200e-003	184.8107	
Mobile	0.0577	0.7265	0.5633	2.7600e-003	0.1411	3.4900e-003	0.1446	0.0380	3.3100e-003	0.0413	0.0000	257.1574	257.1574	0.0195	0.0000	257.6457	
Waste						0.0000	0.0000		0.0000	0.0000	12.5854	0.0000	12.5854	0.7438	0.0000	31.1799	
Water						0.0000	0.0000		0.0000	0.0000	3.6683	18.2008	21.8690	0.3776	9.0700e-003	34.0105	
Total	0.2935	0.7777	0.6067	3.0700e-003	0.1411	7.3800e-003	0.1485	0.0380	7.2000e-003	0.0452	16.2537	459.3362	475.5899	1.1478	0.0113	507.6477	

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Area	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.8000e-004	8.8000e-004	0.0000	0.0000	9.4000e-004	
Energy	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	183.9771	183.9771	6.8700e-003	2.2200e-003	184.8107	
Mobile	0.0502	0.6251	0.4385	2.0900e-003	0.0994	2.5600e-003	0.1019	0.0268	2.4300e-003	0.0292	0.0000	194.9020	194.9020	0.0179	0.0000	195.3500	
Waste						0.0000	0.0000		0.0000	0.0000	12.5854	0.0000	12.5854	0.7438	0.0000	31.1799	
Water						0.0000	0.0000		0.0000	0.0000	3.6683	18.2008	21.8690	0.3776	9.0700e-003	34.0105	
Total	0.2859	0.6763	0.4819	2.4000e-003	0.0994	6.4500e-003	0.1058	0.0268	6.3200e-003	0.0331	16.2537	397.0807	413.3344	1.1462	0.0113	445.3521	

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	2.58	13.04	20.57	21.82	29.58	12.60	28.73	29.56	12.22	26.80	0.00	13.55	13.09	0.14	0.00	12.27

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/25/2019	2/21/2019	5	20	
2	Site Preparation	Site Preparation	2/22/2019	3/7/2019	5	10	
3	Grading	Grading	3/8/2019	4/4/2019	5	20	
4	Building Construction	Building Construction	4/5/2019	12/20/2020	5	230	
5	Paving	Paving	2/21/2020	3/19/2020	5	20	
6	Architectural Coating	Architectural Coating	3/20/2020	4/16/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

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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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	21.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672
Total	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8672

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3.2 Demolition - 2019**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	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	
Total	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	

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	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671	
Total	0.0351	0.3578	0.2206	3.9000e-004		0.0180	0.0180		0.0167	0.0167	0.0000	34.6263	34.6263	9.6300e-003	0.0000	34.8671	

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3.2 Demolition - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	
Total	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.3 Site Preparation - 2019**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	2.7000e-004	2.6100e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6875	
Total	3.8000e-004	2.7000e-004	2.6100e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6875	

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	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195	
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0352	0.0120	0.0472	0.0194	0.0110	0.0304	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195	

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3.3 Site Preparation - 2019**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	2.7000e-004	2.6100e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6875
Total	3.8000e-004	2.7000e-004	2.6100e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6870	0.6870	2.0000e-005	0.0000	0.6875

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	26.6423	26.6423	8.4300e-003	0.0000	26.8530
Total	0.0258	0.2835	0.1629	3.0000e-004	0.0655	0.0140	0.0795	0.0337	0.0129	0.0465	0.0000	26.6423	26.6423	8.4300e-003	0.0000	26.8530

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3.4 Grading - 2019**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	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	
Total	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	

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	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	26.6422	26.6422	8.4300e-003	0.0000	26.8530
Total	0.0258	0.2835	0.1629	3.0000e-004	0.0256	0.0140	0.0395	0.0131	0.0129	0.0260	0.0000	26.6422	26.6422	8.4300e-003	0.0000	26.8530

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3.4 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	
Total	6.4000e-004	4.4000e-004	4.3600e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1449	1.1449	3.0000e-005	0.0000	1.1458	

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2279	2.0341	1.6563	2.6000e-003		0.1245	0.1245		0.1170	0.1170	0.0000	226.8756	226.8756	0.0553	0.0000	228.2573
Total	0.2279	2.0341	1.6563	2.6000e-003		0.1245	0.1245		0.1170	0.1170	0.0000	226.8756	226.8756	0.0553	0.0000	228.2573

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3.5 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	3.7900e-003	0.1035	0.0209	2.3000e-004	5.1500e-003	7.8000e-004	5.9300e-003	1.4900e-003	7.4000e-004	2.2300e-003	0.0000	21.4382	21.4382	1.8300e-003	0.0000	21.4839	
Worker	8.5900e-003	6.0000e-003	0.0589	1.7000e-004	0.0163	1.2000e-004	0.0165	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	15.4681	15.4681	4.4000e-004	0.0000	15.4792	
Total	0.0124	0.1095	0.0797	4.0000e-004	0.0215	9.0000e-004	0.0224	5.8300e-003	8.5000e-004	6.6800e-003	0.0000	36.9064	36.9064	2.2700e-003	0.0000	36.9631	

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	0.2279	2.0341	1.6563	2.6000e-003		0.1245	0.1245		0.1170	0.1170	0.0000	226.8753	226.8753	0.0553	0.0000	228.2570	
Total	0.2279	2.0341	1.6563	2.6000e-003		0.1245	0.1245		0.1170	0.1170	0.0000	226.8753	226.8753	0.0553	0.0000	228.2570	

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3.5 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	3.7900e-003	0.1035	0.0209	2.3000e-004	5.1500e-003	7.8000e-004	5.9300e-003	1.4900e-003	7.4000e-004	2.2300e-003	0.0000	21.4382	21.4382	1.8300e-003	0.0000	21.4839	
Worker	8.5900e-003	6.0000e-003	0.0589	1.7000e-004	0.0163	1.2000e-004	0.0165	4.3400e-003	1.1000e-004	4.4500e-003	0.0000	15.4681	15.4681	4.4000e-004	0.0000	15.4792	
Total	0.0124	0.1095	0.0797	4.0000e-004	0.0215	9.0000e-004	0.0224	5.8300e-003	8.5000e-004	6.6800e-003	0.0000	36.9064	36.9064	2.2700e-003	0.0000	36.9631	

3.5 Building Construction - 2020**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	0.0392	0.3549	0.3117	5.0000e-004		0.0207	0.0207		0.0194	0.0194	0.0000	42.8479	42.8479	0.0105	0.0000	43.1092	
Total	0.0392	0.3549	0.3117	5.0000e-004		0.0207	0.0207		0.0194	0.0194	0.0000	42.8479	42.8479	0.0105	0.0000	43.1092	

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3.5 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	6.0000e-004	0.0181	3.5100e-003	4.0000e-005	9.9000e-004	1.0000e-004	1.0900e-003	2.9000e-004	1.0000e-004	3.8000e-004	0.0000	4.0736	4.0736	3.3000e-004	0.0000	4.0817	
Worker	1.5000e-003	1.0100e-003	0.0101	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.8708	2.8708	7.0000e-005	0.0000	2.8727	
Total	2.1000e-003	0.0191	0.0136	7.0000e-005	4.1200e-003	1.2000e-004	4.2400e-003	1.1200e-003	1.2000e-004	1.2300e-003	0.0000	6.9444	6.9444	4.0000e-004	0.0000	6.9544	

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	0.0392	0.3549	0.3117	5.0000e-004		0.0207	0.0207		0.0194	0.0194	0.0000	42.8478	42.8478	0.0105	0.0000	43.1091	
Total	0.0392	0.3549	0.3117	5.0000e-004		0.0207	0.0207		0.0194	0.0194	0.0000	42.8478	42.8478	0.0105	0.0000	43.1091	

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3.5 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	6.0000e-004	0.0181	3.5100e-003	4.0000e-005	9.9000e-004	1.0000e-004	1.0900e-003	2.9000e-004	1.0000e-004	3.8000e-004	0.0000	4.0736	4.0736	3.3000e-004	0.0000	4.0817	
Worker	1.5000e-003	1.0100e-003	0.0101	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.8708	2.8708	7.0000e-005	0.0000	2.8727	
Total	2.1000e-003	0.0191	0.0136	7.0000e-005	4.1200e-003	1.2000e-004	4.2400e-003	1.1200e-003	1.2000e-004	1.2300e-003	0.0000	6.9444	6.9444	4.0000e-004	0.0000	6.9544	

3.6 Paving - 2020**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	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1902

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3.6 Paving - 2020**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	5.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1084	1.1084	3.0000e-005	0.0000	1.1091	
Total	5.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1084	1.1084	3.0000e-005	0.0000	1.1091	

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	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0136	0.1407	0.1465	2.3000e-004		7.5300e-003	7.5300e-003		6.9300e-003	6.9300e-003	0.0000	20.0282	20.0282	6.4800e-003	0.0000	20.1901

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3.6 Paving - 2020**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	5.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1084	1.1084	3.0000e-005	0.0000	1.1091	
Total	5.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1084	1.1084	3.0000e-005	0.0000	1.1091	

3.7 Architectural Coating - 2020**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	0.3476						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	0.3501	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582

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3.7 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0300e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2956	0.2956	1.0000e-005	0.0000	0.2958
Total	1.5000e-004	1.0000e-004	1.0300e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2956	0.2956	1.0000e-005	0.0000	0.2958

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	0.3476						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	0.3501	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582

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3.7 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0300e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2956	0.2956	1.0000e-005	0.0000	0.2958
Total	1.5000e-004	1.0000e-004	1.0300e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2956	0.2956	1.0000e-005	0.0000	0.2958

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Improve Walkability Design

Improve Destination Accessibility

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0502	0.6251	0.4385	2.0900e-003	0.0994	2.5600e-003	0.1019	0.0268	2.4300e-003	0.0292	0.0000	194.9020	194.9020	0.0179	0.0000	195.3500	
Unmitigated	0.0577	0.7265	0.5633	2.7600e-003	0.1411	3.4900e-003	0.1446	0.0380	3.3100e-003	0.0413	0.0000	257.1574	257.1574	0.0195	0.0000	257.6457	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
General Light Industry	125.00		125.00		125.00		364,939
Total	125.00		125.00		125.00		364,939
							257,010

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.466291	0.031960	0.164877	0.131500	0.023119	0.007290	0.020969	0.142348	0.001645	0.001858	0.006120	0.000997	0.001026

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	128.2920	128.2920	5.8000e-003	1.2000e-003	128.7946
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	128.2920	128.2920	5.8000e-003	1.2000e-003	128.7946
NaturalGas Mitigated	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
NaturalGas Unmitigated	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

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					
General Light Industry	1.0435e+006	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
Total		5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

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5.2 Energy by Land Use - NaturalGas**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					
General Light Industry	1.0435e+006	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
Total		5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	441000	128.2920	5.8000e-003	1.2000e-003	128.7946
Total		128.2920	5.8000e-003	1.2000e-003	128.7946

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	441000	128.2920	5.8000e-003	1.2000e-003	128.7946
Total		128.2920	5.8000e-003	1.2000e-003	128.7946

6.0 Area Detail**6.1 Mitigation Measures Area**

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.8000e-004	8.8000e-004	0.0000	0.0000	9.4000e-004	
Unmitigated	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004	

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0348					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004
Total	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	9.5000e-004

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0348					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1953					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.8000e-004	8.8000e-004	0.0000	0.0000	9.4000e-004
Total	0.2301	0.0000	4.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.8000e-004	8.8000e-004	0.0000	0.0000	9.4000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.8690	0.3776	9.0700e-003	34.0105
Unmitigated	21.8690	0.3776	9.0700e-003	34.0105

7.2 Water by Land Use**Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	11.5625 / 0	21.8690	0.3776	9.0700e-003	34.0105
Total		21.8690	0.3776	9.0700e-003	34.0105

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7.2 Water by Land Use**Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	11.5625 / 0	21.8690	0.3776	9.0700e-003	34.0105
Total		21.8690	0.3776	9.0700e-003	34.0105

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.5854	0.7438	0.0000	31.1799
Unmitigated	12.5854	0.7438	0.0000	31.1799

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	62	12.5854	0.7438	0.0000	31.1799
Total		12.5854	0.7438	0.0000	31.1799

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	62	12.5854	0.7438	0.0000	31.1799
Total		12.5854	0.7438	0.0000	31.1799

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	50.00	1000sqft	8.53	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	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 Project Acreage

Vehicle Trips - ADTs adjusted to match traffic study data of 125 ADTs.

Construction Off-road Equipment Mitigation -

Construction Phase - Operational Run Only

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	4/16/2020	3/19/2020
tblConstructionPhase	PhaseEndDate	2/20/2020	4/4/2019
tblConstructionPhase	PhaseEndDate	2/21/2019	1/24/2019
tblConstructionPhase	PhaseEndDate	4/4/2019	3/7/2019
tblConstructionPhase	PhaseEndDate	3/19/2020	2/20/2020
tblConstructionPhase	PhaseEndDate	3/7/2019	2/21/2019
tblGrading	AcresOfGrading	0.00	10.00
tblLandUse	LotAcreage	1.15	8.53
tblVehicleTrips	ST_TR	1.32	2.50
tblVehicleTrips	SU_TR	0.68	2.50
tblVehicleTrips	WD_TR	6.97	2.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Mitigated Construction

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003
Energy											0.0000	183.9771	183.9771	6.8700e-003	2.2200e-003	184.8107
Mobile											0.0000	287.1480	287.1480	0.0956	0.0000	289.5370
Waste											12.5854	0.0000	12.5854	0.7438	0.0000	31.1799
Water											3.6683	18.2008	21.8690	0.3776	9.0700e-003	34.0105
Total											16.2537	489.3268	505.5805	1.2238	0.0113	539.5391

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003
Energy											0.0000	183.9771	183.9771	6.8700e-003	2.2200e-003	184.8107
Mobile											0.0000	287.1480	287.1480	0.0956	0.0000	289.5370
Waste											12.5854	0.0000	12.5854	0.7438	0.0000	31.1799
Water											3.6683	18.2008	21.8690	0.3776	9.0700e-003	34.0105
Total											16.2537	489.3268	505.5805	1.2238	0.0113	539.5391

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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/25/2019	1/24/2019	5	0	
2	Site Preparation	Site Preparation	2/22/2019	2/21/2019	5	0	
3	Grading	Grading	3/8/2019	3/7/2019	5	0	
4	Building Construction	Building Construction	4/5/2019	4/4/2019	5	0	
5	Paving	Paving	2/21/2020	2/20/2020	5	0	
6	Architectural Coating	Architectural Coating	3/20/2020	3/19/2020	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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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

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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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	21.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

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3.2 Demolition - 2019

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.2 Demolition - 2019

Mitigated Construction Off-Site

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

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3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.3 Site Preparation - 2019

Mitigated Construction Off-Site

3.4 Grading - 2019

Unmitigated Construction On-Site

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3.4 Grading - 2019

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.4 Grading - 2019

Mitigated Construction Off-Site

3.5 Building Construction - 2019

Unmitigated Construction On-Site

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3.5 Building Construction - 2019

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.5 Building Construction - 2019

Mitigated Construction Off-Site

3.6 Paving - 2020

Unmitigated Construction On-Site

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3.6 Paving - 2020

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.6 Paving - 2020

Mitigated Construction Off-Site

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

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3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

Mitigated Construction On-Site

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3.7 Architectural Coating - 2020**Mitigated Construction Off-Site**

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

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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											0.0000	287.1480	287.1480	0.0956	0.0000	289.5370
Unmitigated											0.0000	287.1480	287.1480	0.0956	0.0000	289.5370

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
General Light Industry	125.00	125.00	125.00	364,939	364,939	364,939	364,939
Total	125.00	125.00	125.00	364,939	364,939	364,939	364,939

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.394323	0.055127	0.150223	0.171506	0.046756	0.008777	0.022924	0.138429	0.001266	0.001220	0.006103	0.000952	0.002392

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	128.2920	128.2920	5.8000e-003	1.2000e-003	128.7946
Electricity Unmitigated											0.0000	128.2920	128.2920	5.8000e-003	1.2000e-003	128.7946
NaturalGas Mitigated											0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
NaturalGas Unmitigated											0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

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					
General Light Industry	1.0435e+006											0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
Total												0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

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5.2 Energy by Land Use - NaturalGas**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					
General Light Industry	1.0435e+006											0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160
Total												0.0000	55.6851	55.6851	1.0700e-003	1.0200e-003	56.0160

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	441000	128.2920	5.8000e-003	1.2000e-003	128.7946
Total		128.2920	5.8000e-003	1.2000e-003	128.7946

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	441000	128.2920	5.8000e-003	1.2000e-003	128.7946
Total		128.2920	5.8000e-003	1.2000e-003	128.7946

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											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003
Unmitigated											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003
Total											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003
Total											0.0000	8.9000e-004	8.9000e-004	0.0000	0.0000	1.0000e-003

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.8690	0.3776	9.0700e-003	34.0105
Unmitigated	21.8690	0.3776	9.0700e-003	34.0105

7.2 Water by Land Use**Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	11.5625 / 0	21.8690	0.3776	9.0700e-003	34.0105
Total		21.8690	0.3776	9.0700e-003	34.0105

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7.2 Water by Land Use**Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	11.5625 / 0	21.8690	0.3776	9.0700e-003	34.0105
Total		21.8690	0.3776	9.0700e-003	34.0105

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.5854	0.7438	0.0000	31.1799
Unmitigated	12.5854	0.7438	0.0000	31.1799

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	62	12.5854	0.7438	0.0000	31.1799
Total		12.5854	0.7438	0.0000	31.1799

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	62	12.5854	0.7438	0.0000	31.1799
Total		12.5854	0.7438	0.0000	31.1799

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
