

Air Quality and GHG Emissions Technical Report

J.D. Pasquetti Engineering Inc. Headquarters Project
4080 Delmar Avenue
Rocklin, California

Prepared by:



11060 White Rock Road
Rancho Cordova, California 95670
(916) 782-4427

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ATTACHMENT

A - CalEEMod Output Files

1.0 INTRODUCTION

This document presents results of an air quality and greenhouse gas (GHG) emissions analysis associated with the proposed J.D. Pasquetti Engineering Inc. Headquarters (the “proposed project”) in the City of Rocklin, California. This document provides an overview of the existing air quality conditions at the project site, the air quality regulatory framework, and an analysis of potential air quality impacts that would result from implementation of the proposed project. Other issues related to air emissions covered in this document include potential health and odor impacts. Issues related to climate change and GHG emissions are also included. As noted in this air quality and GHG emissions analysis, the proposed project would result in less than significant air quality and GHG emissions impacts. The supporting information, methodology, assumptions, and detailed results used in the analysis are provided in **Attachment A: CalEEMod Output Files**.

2.0 PROJECT OVERVIEW

The proposed project includes the development of a 9,326 square-foot shop/office building (7,152 square-foot shop + 2,174 square-foot office), an 8,359 square-foot warehouse/office building (6,160 square-foot warehouse + 2,199 square-foot office), a 7,544 square-foot office building (6,539 square-foot office + 1,005 square-foot mezzanine), and associated pavement for parking and internal circulation and pads. The proposed project also includes a gravel yard for equipment parking, drainage and utility improvements, and rough grading for a future office/warehouse and yard. The project site at 4080 Delmar Avenue (APN 045-011-013 & -014) is approximately 7.42 acres. Operational activities at the project site would consist of equipment maintenance, equipment storage and an office staff.

3.0 ANALYSIS METHODOLOGY

Intermittent (short-term construction emissions that occur from activities, such as site-grading and building construction) and long-term air quality impacts related to the operation of the proposed project were evaluated. This analysis focuses on daily emissions from construction and operational (mobile, area, stationary, and fugitive sources) activities. This analysis is consistent with the methods described in the Placer County Air Pollution Control District (PCAPCD)'s *CEQA Air Quality Handbook* (dated November 21, 2017).¹

This air quality analysis includes a review of criteria pollutant² emissions such as nitrogen oxides (NO_x), volatile organic compounds (VOC) as reactive organic gases (ROG)³, particulate matter

¹ Placer County Air Pollution Control District, *CEQA Air Quality Handbook*, November 21, 2017.

<https://www.placerair.org/1801/CEQA-Handbook>

² Criteria air pollutants refer to those air pollutants for which the United States Environmental Protection Agency (USEPA) and California Air Resources Board (CARB) has established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) under the Federal Clean Air Act (CAA).

³ VOC means any compound of carbon, excluding CO, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG

less than 10 micrometers (coarse or PM10), and particulate matter less than 2.5 micrometers (fine or PM2.5). GHG emissions are analyzed in Section 6.

CalEEMod (California Emissions Estimator Model Version 2016.3.2)⁴ was used to estimate air quality and GHG emissions from the proposed project. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant and GHG emissions associated with construction and operation of land use projects.

4.0 EXISTING CONDITIONS

The City of Rocklin is located within the Sacramento Valley Air Basin (SVAB), which includes all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta Counties and portions of Solano and Placer Counties. The SVAB is the northern half of California's Great Valley and is bordered on three sides (west, north, and east) by mountain ranges, with peaks in the eastern range above 9,000 feet. The SVAB is approximately 13,700 square miles and essentially a smooth valley floor with elevations ranging from 40 to 500 feet. The rolling valley is interrupted by the Sutter Buttes, an area of 80 square miles in northern Sutter County, which rise abruptly to more than 2,100 feet above the valley floor.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological and geographical conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and large bodies of water), determine the effect of air pollutant emissions on local air quality.

The climate in the project area is considered Mediterranean, which is characterized by hot, dry summers and cool, wet winters. Within the project area, temperatures range from an average January low of approximately 36 degrees Fahrenheit (°F) to an average July high of approximately 96°F. Between mid-April and mid-October, significant precipitation is unlikely and high temperatures often peak at over 100°F with lows in the high 50s and low 60s.

Winters are fairly mild, with the most rainfall coming in January. Rainfall in the project area averages approximately 26 inches annually and occurs predominantly from October to May. During the winter, highs are typically in the 60s with lows in the 30s. “Tule fog” (thick ground fog) is often present during the autumn and winter months. The typical seasonal pattern is for North Pacific cyclonic storms to periodically move into the area from October through April and for high pressure to dominate over the area and to deflect storms from May to October.

are any reactive compounds of carbon, excluding methane, CO, CO₂ carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

⁴ California Air Pollution Control Officers Association, *California Emissions Estimator Model User's Guide Version 2016.3.2*, November 2017. <http://www.caleemod.com/>

The regional climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell over the northeastern Pacific Ocean. The regional climate is also affected by the temperature moderating effects of the nearby Pacific Ocean. In summer, when the high-pressure cell is strongest, temperatures are very warm and humidity is low. The daily incursion of the sea breeze into the Central Valley, however, creates persistent breezes that moderate the summer heat. In winter, when the high-pressure cell is weakest, conditions are characterized by occasional rainstorms interspersed with stagnant conditions and sometimes heavy fog.

Criteria Air Pollutants

The United States Environmental Protection Agency (USEPA) has established the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) for six common air pollutants known as “criteria pollutants”.⁵ These air pollutants consist of CO, nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM10 and PM2.5), SO₂, and lead (Pb). An ambient air quality standard establishes the concentration above which the pollutant is known to cause adverse health effects to sensitive groups within the population such as children and the elderly. The goal is for localized project effects not to cause or contribute to an exceedance of the standards. Ambient air quality standards are classified as either “primary” or “secondary” standards. Primary standards define levels of air quality, including an adequate margin of safety, necessary to protect the public health. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

The CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional Air Pollution Control Districts and Air Quality Management Districts. CARB regulates local air quality indirectly by establishing State ambient air quality standards and vehicle emissions and fuel standards; and by conducting research, planning and coordinating activities. California has adopted ambient standards (known as California Ambient Air Quality Standards or CAAQS) that are more stringent than the federal standards for some criteria air pollutants. These ambient air standards are shown in **Table 1**.

5 U.S. Environmental Protection Agency, *Six Common Air Pollutants*, <https://www.epa.gov/criteria-air-pollutants>

Table 1: State and National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	— 0.070 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9.0 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide (NO ₂)	1 Hour Annual	0.18 ppm 0.03 ppm	0.10 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO ₂)	1 Hour 3 Hour 24 Hour Annual	0.25 ppm — 0.04 ppm —	0.075 ppm 0.5 ppm 0.14 ppm 0.030 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM10)	24 Hour Annual	50 µg/m ³ 20 µg/m ³	150 µg/m ³ —	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM2.5)	24 Hour Annual	— 12 µg/m ³	35.0 µg/m ³ 12.0 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
Lead (Pb)	Month Rolling 3 Month	1.5 µg/m ³ —	— 0.15 µg/m ³	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

SOURCE: California Air Resource Board, Ambient Air Quality Standards, May 4, 2016. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

NOTE: (ppm = parts per million; µg/m³ = micrograms per cubic meter)

Local Air Quality

CARB maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The monitoring station closest to the project site is in Roseville (at 151 North Sunrise Boulevard), approximately five miles southwest of the project site; where levels of ozone, PM10, and PM2.5 are recorded. **Table 2** summarizes the most recent three years of data (2016 through 2018) from the monitoring station. The western Placer County portion of the SVAB is designated as a nonattainment area for State standards for ozone and PM10, and for federal standards for ozone and PM2.5.⁶

Table 2: Air Quality Data Summary (2016 through 2018)

Pollutant	Monitoring Data by Year			
	Standard	2016	2017	2018
Ozone				
Highest 1 Hour Average (ppm)	0.090	0.115	0.117	0.110
Days over State Standard		5	4	4
Highest 8 Hour Average (ppm)	0.070	0.093	0.089	0.084
Days over State Standard		20	10	11
Highest 8 Hour Average (ppm)	0.070	0.092	0.088	0.083
Days over National Standard		20	9	11
PM10				
Highest 24 Hour Average ($\mu\text{g}/\text{m}^3$)	50	39.1	65.8	211.3
Days over State Standard		0	5	16
PM2.5				
Highest 24 Hour Average ($\mu\text{g}/\text{m}^3$)	35	21.2	27.8	171.8
Days over National Standard		0	0	3
State Annual Average ($\mu\text{g}/\text{m}^3$)	12	6.9	7.4	12.2

SOURCE: California Air Resource Board, *Air Quality Data Statistics 2016 - 2018*, <http://www.arb.ca.gov/adam/welcome.html>.

NOTES: Values in **bold** are in excess of at least one applicable standard. Generally, state standards and national standards are not to be exceeded more than once per year. (ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter)

5.0 AIR QUALITY IMPACT ANALYSIS

This air quality analysis includes a review of pollutant emissions such as NO_x, VOC as ROG, and PM10.

Thresholds of Significance

The PCAPCD has developed thresholds of significance for criteria pollutants and GHGs for CEQA purposes. Significance thresholds are presented in the PCAPCD's *CEQA Air Quality Handbook*. The thresholds of significance applied to assess project-level air quality impacts for criteria pollutants are:

- Maximum daily construction emissions of 82 pounds per day of ROG, NO_x, or PM10; and

6 California Air Resources Board, *Area Designation Maps/State and National*, <http://www.arb.ca.gov/desig/adm/adm.htm>

- Maximum daily operational emissions of 55 pounds per day of ROG or NO_x, and 82 pounds per day of PM10.

The thresholds of significance applied to assess cumulative-level air quality impacts for criteria pollutants are:

- Maximum daily operational emissions of 55 pounds per day of ROG or NO_x, and 82 pounds per day of PM10 (Same as project-level).

GHG emissions and their thresholds of significance are discussed in **Section 6**.

PCAPCD Rules and Regulations

All projects are subject to rules and regulations adopted by the PCAPCD in effect at the time of construction. Specific rules applicable to future construction resulting from the implementation of the proposed project may include, but are not limited to:

- Rule 202 – Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- Rule 205 – Nuisances. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property.
- Rule 207 – Particulate Matter. For the Sacramento Valley Air Basin and the Mountain Counties Air Basin portions of the PCAPCD, a person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of: 0.1 grains per cubic foot of gas at District standard conditions.
- Rule 217 – Cutback and Emulsified Asphalt Paving Materials. A person shall not manufacture for sale nor use for paving, road construction, or road maintenance any rapid cure cutback asphalt; slow cure cutback asphalt containing organic compounds which evaporate at 500°F or lower as determined by current American Society for Testing and Materials (ASTM) Method D402; medium cure cutback asphalt except as provided in Section 1.2.; or emulsified asphalt containing organic compounds which evaporate at 500°F or lower as determined by current ASTM Method D244, in excess of 3 percent by volume.
- Rule 218 – Application of Architectural Coatings. No person shall manufacture, blend, or repackage for sale within the PCAPCD; supply, sell, or offer for sale within the PCAPCD;

or solicit for application or apply within the PCAPCD, any architectural coating with a VOC content in excess of the corresponding specified manufacturer's maximum recommendation.

- Rule 228 – Fugitive Dust
 - Visible Emissions Not Allowed Beyond the Boundary Line: A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.
 - Visible Emissions from Active Operations: In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines.
 - Concentration Limit: A person shall not cause or allow PM10 levels to exceed 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (24-hour average) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other USEPA-approved equivalent method for PM10 monitoring.
 - Track-Out onto Paved Public Roadways: Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.
 - The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.
 - All visible roadway dust tracked out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a High Efficiency Particulate Air filter-equipped vacuum device shall be used for roadway dust removal.
 - Any material tracked out, or carried by erosion, and cleanup water shall be prevented from entering waterways or stormwater inlets as required to comply with water quality control requirements.

- Minimum Dust Control Requirements. The following dust control measures are to be initiated at the start and maintained throughout the duration of any construction or grading activity, including any construction or grading for road construction or maintenance.
 - Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered.
 - The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.
 - Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
 - Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.
 - Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.
 - When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust control measures, grading and earthmoving operations shall be suspended.
 - No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either covered with tarps; or wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
- Wind-Driven Fugitive Dust Control. A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

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

The Sacramento region is classified as a severe-15 nonattainment area for the 2008 8-hour ozone NAAQS. The Sacramento Metropolitan Air Quality Management District (SMAQMD) along with

the PCAPCD and other local air districts (Yolo-Solano, Feather River, and El Dorado County Air Quality Management Districts) which comprise the Sacramento Federal Ozone Nonattainment Area (SFNA) developed the *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (July 24, 2017)⁷ to demonstrate attainment of the 2008 8-hour NAAQS of 75 ppb by an attainment year of 2024. The *2017 Plan* was approved by the SMAQMD board on August 24, 2017 and CARB approved the *2017 Plan* on November 16, 2017. The *2017 Plan* is the applicable air quality plan for the proposed project.

A conflict with, or obstruction of, implementation of the *2017 Plan* could occur if a project generates greater emissions than what has been projected for the site in the emissions inventory of the *2017 Plan*. The emissions inventory of the *2017 Plan* utilizes the planning assumptions from the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS), which was adopted by the Sacramento Area Council of Governments (SACOG) on February 18, 2016. Emissions inventories are developed based on projected increases in population, employment, regional vehicle miles traveled, and associated area sources within the region, which are based on regional projections that are, in turn, based on the general plan and zoning designations for the region. The proposed project would not change the existing general plan or zoning designation for the project site. Therefore, the proposed project would not generate greater emissions than what has been projected for the site in the emissions inventory of the *2017 Plan*.

The proposed project would support the primary goals of the *2017 Plan* and would not disrupt or hinder implementation of the *2017 Plan* control measures. Therefore, the proposed project would have a less-than-significant impact.

IMPACT AQ-2: Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Short-term construction emissions that occur from activities, such as site-grading and building construction and long-term air quality impacts related to the operation of the proposed project were evaluated.

Construction

Construction activities are expected to be completed over approximately six months in the year 2020. Site preparation and grading activities are estimated to occur for approximately 20 days. Approximately 8,900 cubic yards of soil (based 4,800 cubic yards of cut and 13,700 cubic yards of fill)⁸ and 1,750 cubic yards of aggregate (for gravel yard parking and drainage improvements) would be imported, which would generate approximately 666 haul truck round trips. Typically,

7 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, July 24, 2017.
<http://www.airquality.org/ProgramCoordination/Documents/Sac%20Regional%202008%20NAAQS%20Attainment%20and%20RFP%20Plan.pdf>

8 Cartwright Nor Cal, Preliminary Grading and Drainage Plan, dated July 24, 2019.

construction activities would occur eight hours per day, Monday through Friday. **Table 3** provides the estimated construction schedule for each phase.

Table 3: Estimated Project Construction Schedule

Phase	Description	Start	End	Working Days
1	Site Preparation	07/01/2020	07/02/2020	2
2	Grading	07/03/2020	07/28/2020	18
3	Utilities/Trenching	07/29/2020	09/08/2020	30
4	Paving	09/09/2020	09/14/2020	4
5	Building Construction	09/15/2020	03/01/2021	120
6	Architectural Coating	03/02/2021	03/09/2021	6

SOURCE: CalEEMod Version 2016.3.2.

Based on CalEEMod, the estimated construction equipment associated with the proposed project along with the number of pieces of equipment, daily hours of operation, horsepower (hp), and load factor (i.e., percent of full throttle) are shown in **Table 4**.

Table 4: Estimated Project Construction Equipment Usage

Phase	Equipment	Amount	Daily Hours	HP	Load Factor
Site Preparation	Graders	1	8	187	0.41
Site Preparation	Rubber Tired Dozers	1	7	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Grading	Graders	1	6	187	0.41
Grading	Rubber Tired Dozers	1	6	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7	97	0.37
Utilities/Trenching	Tractors/Loaders/Backhoes	1	8	97	0.37
Utilities/Trenching	Trenchers	1	8	78	0.50
Utilities/Trenching	Excavators	1	8	158	0.38
Building Construction	Cranes	1	6	231	0.29
Building Construction	Forklifts	1	6	89	0.20
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Building Construction	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	6	9	0.56
Paving	Pavers	1	6	130	0.42
Paving	Paving Equipment	1	8	132	0.36
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

SOURCE: CalEEMod Version 2016.3.2.

Project construction would generate short-term emissions of air pollutants, including fugitive dust and equipment exhaust emissions. The PCAPCD *CEQA Air Quality Handbook* recommends quantification of construction-related emissions and comparison of those emissions to significance

thresholds. The CalEEMod was used to quantify construction-related pollutant emissions. CalEEMod output worksheets are also included in **Attachment A: CalEEMod Output Files**.

The emissions generated from these construction activities include:

- Dust (including PM10 and PM2.5) primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe) such as material handling and travel on unpaved surfaces;
- Combustion emissions of criteria air pollutants (ROG, NO_x, CO, PM10, and PM2.5) primarily from operation of heavy off-road construction equipment, haul trucks, (primarily diesel-operated), and construction worker automobile trips (primarily gasoline-operated); and
- Fugitive VOC emissions from architectural coating.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. Poor construction practices could result in substantial emissions of fugitive dust that could become a nuisance. The PCAPCD requires construction projects to comply with District Rules & Regulations for Construction. Compliance with the PCAPCD Rules & Regulations for construction, specifically Rule 228 – Fugitive Dust, which requires implementation of minimum dust control requirements, would prevent and control fugitive dust emissions.

Estimated maximum daily criteria pollutants emissions that would be generated by construction of the proposed project are shown in **Table 5**. Criteria pollutant emissions from construction would be below the PCAPCD’s maximum daily significance thresholds for construction. Therefore, proposed project construction would have a less-than-significant impact.

Table 5: Estimated Maximum Daily Construction Emissions (pounds)

Condition	ROG	NOx	PM10
Maximum Daily Emissions from Construction	41.7	35.6	8.8
Significance Threshold	82	82	82
Potentially Significant (Yes or No)?	No	No	No

SOURCE: CalEEMod Version 2016.3.2.

Operations

The proposed project would generate operational criteria pollutant emissions from transportation, energy and area sources. Operational emissions were estimated using the CalEEMod. The proposed project land use types and size and other project-specific information were used to make the calculations. Unless otherwise noted, the CalEEMod model defaults for Placer County were used. The operational emissions estimates assume an operational year of 2021. CalEEMod output worksheets are included in **Attachment A: CalEEMod Output Files**.

CalEEMod trip rates were revised according to trip rates provided by J.D. Pasquetti Engineering Inc. The daily trip rates input into the CalEEMod to determine the daily emissions were 15 daily round trips for employees, eight daily round trips for visitors/customers, and three daily round trips for heavy trucks.⁹

Estimated daily (summer and winter) operational criteria pollutant emissions that would be associated with the proposed project are presented in **Table 6** and are compared to PCAPCD's thresholds of significance. The estimated proposed project operational emissions would be below the PCAPCD's significance thresholds for operations. Therefore, proposed project operations would have a less-than-significant impact.

Table 6: Estimated Maximum Daily Operational Emissions (pounds)

Condition	ROG	NOx	PM10
Winter Daily Emissions	0.73	1.29	0.29
Summer Daily Emissions	0.75	1.27	0.29
Maximum Daily Emissions	0.75	1.29	0.29
Significance Threshold	55	55	82
Potentially Significant (Yes or No)?	No	No	No

SOURCE: CalEEMod Version 2016.3.2.

Cumulative Impacts

The PCAPCD cumulative significance thresholds are the same as the project-level significance thresholds. Therefore, a project would have a significant cumulative impact if the project exceeds the project-level significance thresholds. As disclosed in this air quality analysis, the proposed project would not exceed project-level air quality significance thresholds, thus the proposed project would not generate cumulatively considerable air emissions. Therefore, the proposed project would have a less-than-significant cumulative impact.

Conclusion

The PCAPCD project-level and cumulative significance thresholds are based on the PCAPCD's New Source Review (NSR) rule emission offset requirements for ROG, NOx, and PM10.¹⁰ The NSR rule requires stationary sources to offset emissions when they emit pollutants in excess of certain levels (offset thresholds), and the emission offset thresholds are based on the nonattainment designation for the region. Therefore, projects with emissions below PCAPCD significance thresholds would not result in a cumulatively considerable net increase of a nonattainment criteria pollutant. As disclosed in this air quality analysis, the proposed project would not exceed PCAPCD significance thresholds, therefore, the proposed project would have a less-than-significant impact.

⁹ Pasquetti, Jason. Air Quality Data Request Response, November 20, 2019.

¹⁰ Placer County Air Pollution Control District, *California Environmental Quality Act Thresholds of Significance Justification Report*, October 2016.

IMPACT AQ-3: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Residential land uses (single-family homes) are located approximately 200 and 400 feet from the southern and western project site boundaries, respectively. On average, construction activities would be approximately 500 feet from the nearest residence (based on the distance from the center of the project site to the nearest residence). There are no schools or daycare facilities within 1,000 feet of the project site.

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TAC are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations.

The proposed project would constitute a new emission source of DPM¹¹ due to construction activities (on-road haul truck and off-road equipment exhaust emissions). Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. The proposed project is a short-term construction activity (approximately six months) that would not generate substantial TAC emissions. Construction equipment would operate intermittently throughout the course of a day and only portions of the site would be disturbed at a time. Off-road construction equipment would be regulated per the State's In-Use Off-Road Diesel Vehicle Regulation and on-road haul trucks would be regulated per the State's Truck and Bus Regulation. Project construction would also be required to comply with all applicable PCAPCD Rules & Regulations for construction. Therefore, the proposed project would have a less-than-significant impact relative to health impacts during construction.

11 In August of 1998, CARB identified particulate emissions from diesel-fueled engines as a toxic air contaminant. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. The document represents a proposal to reduce diesel particulate emissions, with the goal to reduce emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

The proposed project would generate a small amount of vehicle trips which would not expose sensitive receptors to substantial pollutant concentrations. The proposed project does not include any on-site operational activities that would expose sensitive receptors to substantial pollutant concentrations as the proposed project would provide a company headquarters for office staff and equipment maintenance/storage. Therefore, the proposed project would have a less-than-significant impact relative to health impacts during operations.

IMPACT AQ-4: Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Any project with the potential to frequently expose members of the public to objectionable odors is deemed to have a significant impact. As a general matter, the types of development that pose potential odor problems include agriculture, food processing, dairies, rendering, refineries, chemical plants, wastewater treatment plants, landfills, composting facilities, and transfer stations. No such odiferous uses would be a part of the proposed project. The proposed project would provide a company headquarters for office staff and equipment maintenance/storage. RCH Group performed a site visit on December 3, 2019 at J.D. Pasquetti Engineering's existing headquarters in Lincoln, CA and no operational odors were detected onsite nor were any potentially odorous sources or activities identified onsite. Therefore, odor impacts associated with the proposed project would be less than significant.

6.0 GREENHOUSE GAS EMISSIONS ANALYSIS

“Global warming” and “global climate change” are the terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal, with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning and deforestation have been responsible for most of the observed temperature increase. These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth’s atmosphere are thought to be the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases

in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), ozone, and water vapor.

While the presence of the primary GHGs in the atmosphere are naturally occurring, CO₂, CH₄, and N₂O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

CO₂ is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂, CH₄, and N₂O are substantially more potent GHG than CO₂, with GWP of 25 and 310 times that of CO₂, respectively.

In emissions inventories, GHG emissions are typically reported in terms metric tons of CO₂ equivalents (CO₂e). CO₂e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWP than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e.

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations of CO₂). In pre-industrial times (c. 1860), concentrations of atmospheric CO₂ were approximately 280 parts per million (ppm). By October 2019, atmospheric CO₂ concentrations had increased to 408.5 ppm, by over 46 percent above pre-industrial concentrations.¹²

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are

¹² Earth System Research Laboratory, *Recent Monthly Mean CO₂ at Mauna Lora*, www.esrl.noaa.gov/gmd/ccgg/trends/

likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.¹³

City of Rocklin General Plan

The City of Rocklin General Plan was published in October of 2012.¹⁴ The General Plan Conservation Element addresses the conservation, development, and utilization of natural resources including air quality. The goals and policies reflect an increased emphasis on protection of valued natural resources as the community continues to develop, and provide specific direction as to how that protection should occur. The following goals/policies from the Conservation Element are related to air quality/GHG emissions:

- Require development projects to incorporate stationary and mobile source control measures recommended by the Placer County Air Pollution Control District (PCAPCD) and approved by the City for protection of air quality during construction and subsequent operations.
- Continue to consult with the PCAPCD in the development of stationary and mobile source control measures affecting the City of Rocklin.

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association (CAPCOA), representing California's 35 local air districts, launched the CAPCOA *Greenhouse Gas Reduction Exchange (GHG Rx)*.¹⁵ The *Exchange* provides a reliable, low-cost, secure platform to encourage locally generated, high quality GHG emission reduction credits that can be used to meet CEQA or other compliance requirements. The GHG Rx features locally generated and properly validated GHG emission reduction credits from voluntary projects within California and allow interaction between those who create the credits, potential buyers and funding organizations.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address

13 California Environmental Protection Agency, *2006 Final Climate Action Team Report to the Governor and Legislature*, March 2006. http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF.

14 City of Rocklin, *General Plan*, October 2012, <https://www.rocklin.ca.us/post/general-plan>

15 CAPCOA *Greenhouse Gas Exchange*, <http://xappprod.aqmd.gov/ghgrx>.

GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents.

Executive Order No. B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate

2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders “All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets.” The Executive Order also states that “CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.” The CARB is currently moving forward with a second update to the Climate Change Scoping Plan to reflect the 2030 reduction target. The updated Scoping Plan will provide a framework for achieving the 2030 target. In September of 2016, the AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

California Green Building Standard Code

The effective date of the 2016 changes to the California Green Building Standards Code, Part 11, Title 24 (CALGreen) is January 1, 2017. CALGreen is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

CALGreen does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. CALGreen also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard, which buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, CALGreen is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impacts during and after construction.

CALGreen contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. CALGreen provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. The following provides examples of CALGreen requirements:

- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles.

- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- Construction waste. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- Wastewater reduction. Each building shall reduce the generation of wastewater by installation of water-conserving fixtures or using nonpotable water systems.
- Water use savings. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40-percent reductions.
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas.
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.
- Building commissioning. Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Greenhouse Gas Emission Estimates

Worldwide emissions of GHG in 2014 were 45.7 billion tons of CO₂e per year.¹⁶ This value includes ongoing emissions from industrial and agricultural sources, but excludes emissions from land use changes.

In 2017, the United States emitted about 6,456.7 million metric tons of CO₂. Emissions decreased from 2016 to 2017 by 0.5 percent. Greenhouse gas emissions in 2017 (after accounting for sequestration from the land sector) were 13 percent below 2005 levels. This decrease was largely driven by a decrease in emissions from fossil fuel combustion, which was a result of multiple factors including a continued shift from coal to natural gas and increased use of renewables in the electric power sector, and milder weather that contributed to less overall electricity use.¹⁷

In 2017, California emitted approximately 424 million metric tons of CO₂e, five million metric tons of CO₂e lower than 2016 levels and seven million metric tons of CO₂e below the 2020 GHG

16 Climate Analysis Indicator Tool, <http://cait.wri.org/>

17 United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, April 11, 2019, <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2016>

Limit of 431 million metric tons of CO₂e. Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. Compared to 2016, California's GDP grew 3.6 percent while the carbon intensity of its economy declined by 4.5 percent. The transportation sector remains the largest source of GHG emissions in the state, but saw a one percent increase in emissions in 2017, the lowest growth rate over the past four years.¹⁸

The composition of GHG emissions in California (expressed as CO₂e) were as follows:

- CO₂ accounted for 83 percent;
- CH₄ accounted for nine percent;
- N₂O accounted for three percent; and
- Fluorinated gases (hydrofluorocarbons (HFCs), perfluorinated compounds (PFCs), and sulfur hexafluoride (SF₆)) accounted for five percent.

Of these gases, the transportation is the source of approximately 40 percent of the State's GHG emissions. The annual increase in transportation emissions in 2017 has slowed down slightly compared to the previous three years. Emissions from the electricity sector account for 15 percent of the inventory and show another large drop in 2017 due to a large increase in renewable energy. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (for the purpose of the GHG inventory, these include hydro, solar, wind, and nuclear energy) than from GHG-emitting sources for both in-state generation and total (in-state plus imports) generation in 2017. The industrial sector has seen a slight emissions decrease in the past few years, and remains at 21 percent of the inventory.¹⁹

The City of Rocklin published a community-wide GHG emissions inventory for the year of 2008. The transportation sector was responsible for the majority (54.7 percent) of the emissions. Electricity and natural gas consumption in residential and commercial/industrial sources contribute 44.9 percent of the communitywide emissions. The City of Rocklin emitted approximately 6,200 metric tons of CO₂e in 2008.²⁰

18 California Air Resources Board, *Emissions Trends Report 2000-2017*, July 11, 2018,
https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

19 California Air Resources Board, *Emissions Trends Report 2000-2017*, July 11, 2018,
https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

20 City of Rocklin, 2008 Community-wide Baseline Greenhouse Gas Emissions Inventory, July 2010,
https://www.rocklin.ca.us/sites/main/files/file-attachments/appendix_c_gpacir_8-6-12.pdf

Thresholds of Significance

The thresholds of significance applied to assess project-level air quality impacts for GHG emissions are:

- Construction phases of all projects and operational phases of stationary source projects with GHG emissions less than 10,000 metric tons of CO₂e per year are considered less than significant.
- Operational phases of land use projects with GHG emissions below the De Minimis Level of 1,100 metric tons of CO₂e per year are considered less than significant.
- Operational phases of land use projects with GHG emissions greater than 1,100 metric tons of CO₂e per year but less than 10,000 metric tons of CO₂e per year are compared to the following Efficiency Matrix to determine significance:
 - Residential land use projects with operational GHG emissions that meet the following efficiencies are considered less than significant:
 - Residential land use projects in urban areas with GHG emissions at or below 4.5 metric tons of CO₂e per year/capita
 - Residential land use projects in rural areas with GHG emissions at or below 5.5 metric tons of CO₂e per year/capita
 - Non-Residential land use projects with operational GHG emissions that meet the following efficiencies are considered less than significant:
 - Non-Residential land use projects in urban areas with GHG emissions at or below 26.5 metric tons of CO₂e per year/1,000 square feet
 - Non-Residential land use projects in rural areas with GHG emissions at or below 27.3 metric tons of CO₂e per year/1,000 square feet
- Operational phases of land use projects with GHG emissions greater than 10,000 metric tons of CO₂e per year are deemed to have a potentially significant GHG impact and would be deemed to have a cumulatively considerable contribution to global climate change

For quantifying a project's GHG emissions, PCAPCD recommends that all GHG emissions from a project be estimated, including a project's direct and indirect GHG emissions from operations. Direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption.

IMPACT GHG-1: Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

CalEEMod was used to quantify GHG emissions associated with proposed project construction activities, as well as long-term operational emissions produced by motor vehicles, natural gas combustion for space and water heating, electricity use, water use, solid waste and landscape maintenance equipment. CalEEMod incorporates GHG emission factors for the central electric utility serving the project area and mitigation measures based on the California Air Pollution Control Officer's Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures*.²¹

CalEEMod is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. The operational year of 2021 was analyzed since it is the first full year that the proposed project could conceivably be occupied. Default rates for energy consumption were assumed in the model.

The proposed project's estimated construction and operational GHG emissions are presented in **Table 7**. The estimated annual construction GHG emissions are approximately 178 metric tons of CO₂e in 2020 and approximately 51 metric tons of CO₂e in 2021, which is less than the PCAPCD Bright-Line significance threshold of 10,000 metric tons of CO₂e per year. Therefore, the construction emissions from the proposed project would have a less-than-significant impact on climate change.

The estimated operational GHG emissions are approximately 193 metric tons of CO₂e, which is below the PCAPCD De Minimis Level of 1,100 metric tons of CO₂e per year. Therefore, the operational emissions from the proposed project would have a less-than-significant impact on climate change. CalEEMod output worksheets are included in **Attachment A: CalEEMod Output Files**.

21 California Air Pollution Control Officer's Association, *Quantifying Greenhouse Gas Mitigation Measures*, August, 2010, <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

Table 7: Estimated Greenhouse Gas Emissions (metric tons)

Source	Annual Metric Tons of CO ₂ e
Construction Emissions (2020+2021)	229
Significance Threshold	10,000
Potentially Significant (Yes or No)?	No
Operations	
Area Sources	<0.1
Energy	79.2
Mobile	83.7
Solid Waste	13.9
Water	16.6
Total Operational Emissions	193
PCAPCD De Minimis Level	1,100
Potentially Significant (Yes or No)?	No

SOURCE: CalEEMod Version 2016.3.2.

IMPACT GHG-2: Would the proposed project conflict with the applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The City of Rocklin does not have an adopted Climate Action Plan or GHG Reduction Plan. The proposed project would result in a significant impact if it would be in conflict with State plans, policies and regulations adopted for the purpose of reducing GHG emissions, such as AB 32. The assumption is that projects that do not exceed the GHG significance thresholds adopted by the PCAPCD would not conflict with State policies, plans and regulations. As disclosed in this GHG emissions analysis, the proposed project would not exceed and would be well below PCAPCD GHG significance thresholds. Therefore, the proposed project would have a less-than-significant impact.

Attachment A

CalEEMod Output Files

Construction and Operational Emissions

- Annual Emissions
- Summer Daily Emissions
- Winter Daily Emissions

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Annual

J.D. Pasquetti Engineering Inc. Headquarters
Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.54	1000sqft	0.17	7,544.00	0
General Office Building	2.17	1000sqft	0.05	2,174.00	0
General Light Industry	7.15	1000sqft	0.16	7,152.00	0
General Light Industry	6.16	1000sqft	0.14	6,160.00	0
Other Asphalt Surfaces	54.00	1000sqft	1.24	54,000.00	0
General Office Building	2.20	1000sqft	0.05	2,199.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2021
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

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Annual

Project Characteristics -

Land Use - Main Office Building: 6539 sf + 1005 sf (mezz) = 7544 sf

Warehouse/Office: 6160 sf (warehouse) + 2199 sf (office)

Shop/Office: 7152 sf (shop) + 2174 sf (office)

Construction Phase - Jason Pasquetti, 2019.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Utilities/Trenching phase added

Grading - Soil and aggregate import

Vehicle Trips - Jason Pasquetti, 2019. 15 employee round trips, 8 visitor/customer round trips and 3 heavy truck round trips per day.

Fleet Mix - 3 heavy truck round trips per day

Energy Mitigation - 2019 Standards will exceed 2016 Standards by 30% for non residential buildings

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	10.00	4.00
tblConstructionPhase	NumDays	200.00	120.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	7/8/2020	7/28/2020
tblConstructionPhase	PhaseEndDate	4/28/2021	9/14/2020
tblConstructionPhase	PhaseEndDate	4/14/2021	3/1/2021
tblConstructionPhase	PhaseEndDate	5/12/2021	3/9/2021
tblConstructionPhase	PhaseStartDate	4/15/2021	9/9/2020
tblConstructionPhase	PhaseStartDate	7/9/2020	9/15/2020
tblConstructionPhase	PhaseStartDate	4/29/2021	3/2/2021
tblFleetMix	HHD	0.05	0.50
tblFleetMix	LDA	0.49	0.00

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Annual

tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.22	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2840e-003	0.00
tblFleetMix	MCY	5.9610e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.2320e-003	0.00
tblFleetMix	MHD	0.03	0.50
tblFleetMix	OBUS	1.4460e-003	0.00
tblFleetMix	SBUS	7.7300e-004	0.00
tblFleetMix	UBUS	1.2050e-003	0.00
tblGrading	AcresOfGrading	6.75	5.05
tblGrading	AcresOfGrading	1.00	5.05
tblGrading	MaterialImported	0.00	10,650.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblVehicleTrips	ST_TR	1.32	0.45
tblVehicleTrips	ST_TR	2.46	3.86
tblVehicleTrips	SU_TR	0.68	0.45
tblVehicleTrips	SU_TR	1.05	3.86
tblVehicleTrips	WD_TR	6.97	0.45
tblVehicleTrips	WD_TR	11.03	3.86

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					
2020	0.1218	1.1214	0.8012	2.0100e-003	0.0780	0.0480	0.1259	0.0330	0.0456	0.0786	0.0000	176.9564	176.9564	0.0256	0.0000	177.5970
2021	0.1662	0.3222	0.2984	6.0000e-004	7.2000e-003	0.0148	0.0220	1.9600e-003	0.0143	0.0162	0.0000	50.8792	50.8792	7.3100e-003	0.0000	51.0619
Maximum	0.1662	1.1214	0.8012	2.0100e-003	0.0780	0.0480	0.1259	0.0330	0.0456	0.0786	0.0000	176.9564	176.9564	0.0256	0.0000	177.5970

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					
2020	0.1218	1.1214	0.8012	2.0100e-003	0.0780	0.0480	0.1259	0.0330	0.0456	0.0786	0.0000	176.9562	176.9562	0.0256	0.0000	177.5968
2021	0.1662	0.3222	0.2984	6.0000e-004	7.2000e-003	0.0148	0.0220	1.9600e-003	0.0143	0.0162	0.0000	50.8791	50.8791	7.3100e-003	0.0000	51.0619
Maximum	0.1662	1.1214	0.8012	2.0100e-003	0.0780	0.0480	0.1259	0.0330	0.0456	0.0786	0.0000	176.9562	176.9562	0.0256	0.0000	177.5968

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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
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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2020	9-30-2020	0.6255	0.6255
2	10-1-2020	12-31-2020	0.6116	0.6116
3	1-1-2021	3-31-2021	0.4898	0.4898
		Highest	0.6255	0.6255

2.2 Overall OperationalUnmitigated 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	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Energy	2.4000e-003	0.0218	0.0183	1.3000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	91.1352	91.1352	3.5000e-003	1.0700e-003	91.5402
Mobile	0.0173	0.2195	0.1764	9.0000e-004	0.0487	7.9000e-004	0.0495	0.0132	7.5000e-004	0.0140	0.0000	83.6136	83.6136	3.5800e-003	0.0000	83.7030
Waste						0.0000	0.0000		0.0000	0.0000	5.6005	0.0000	5.6005	0.3310	0.0000	13.8751
Water						0.0000	0.0000		0.0000	0.0000	1.6486	9.5021	11.1507	0.1698	4.0900e-003	16.6126
Total	0.1342	0.2413	0.1955	1.0300e-003	0.0487	2.4500e-003	0.0511	0.0132	2.4100e-003	0.0157	7.2491	184.2522	191.5014	0.5078	5.1600e-003	205.7324

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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	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003	
Energy	1.6900e-003	0.0153	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	78.8591	78.8591	3.1300e-003	8.9000e-004	79.2018	
Mobile	0.0173	0.2195	0.1764	9.0000e-004	0.0487	7.9000e-004	0.0495	0.0132	7.5000e-004	0.0140	0.0000	83.6136	83.6136	3.5800e-003	0.0000	83.7030	
Waste						0.0000	0.0000		0.0000	0.0000	5.6005	0.0000	5.6005	0.3310	0.0000	13.8751	
Water						0.0000	0.0000		0.0000	0.0000	1.6486	9.5021	11.1507	0.1698	4.0900e-003	16.6126	
Total	0.1335	0.2348	0.1901	9.9000e-004	0.0487	1.9600e-003	0.0506	0.0132	1.9200e-003	0.0152	7.2491	171.9761	179.2253	0.5075	4.9800e-003	193.3940	

	ROG	NOx	CO	SO2	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	0.53	2.67	2.76	3.88	0.00	20.00	0.96	0.00	20.33	3.13	0.00	6.66	6.41	0.07	3.49	6.00

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	Site Preparation	Site Preparation	7/1/2020	7/2/2020	5	2	
2	Grading	Grading	7/3/2020	7/28/2020	5	18	
3	Building Construction	Building Construction	9/15/2020	3/1/2021	5	120	
4	Paving	Paving	9/9/2020	9/14/2020	5	4	
5	Architectural Coating	Architectural Coating	3/2/2021	3/9/2021	5	6	
6	Utilities/Trenching	Trenching	7/29/2020	9/8/2020	5	30	

Acres of Grading (Site Preparation Phase): 5.05

Acres of Grading (Grading Phase): 5.05

Acres of Paving: 1.24

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,844; Non-Residential Outdoor: 12,615; Striped Parking Area: 3,240 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Utilities/Trenching	Trenchers	1	8.00	78	0.50
Utilities/Trenching	Excavators	1	8.00	158	0.38

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
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,331.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities/Trenching	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 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				
Fugitive Dust					7.9500e-003	0.0000	7.9500e-003	3.1900e-003	0.0000	3.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005	8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249	
Total	1.6300e-003	0.0184	7.7100e-003	2.0000e-005	7.9500e-003	8.2000e-004	8.7700e-003	3.1900e-003	7.6000e-004	3.9500e-003	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249

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3.2 Site Preparation - 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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0542	0.0542	0.0000	0.0000	0.0000	0.0543	
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0542	0.0542	0.0000	0.0000	0.0000	0.0543	

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					7.9500e-003	0.0000	7.9500e-003	3.1900e-003	0.0000	3.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249	
Total	1.6300e-003	0.0184	7.7100e-003	2.0000e-005	7.9500e-003	8.2000e-004	8.7700e-003	3.1900e-003	7.6000e-004	3.9500e-003	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249	

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3.2 Site Preparation - 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	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0542	0.0542	0.0000	0.0000	0.0000	0.0543	
Total	3.0000e-005	2.0000e-005	2.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0542	0.0542	0.0000	0.0000	0.0000	0.0543	

3.3 Grading - 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					
Fugitive Dust					0.0439	0.0000	0.0439	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1358	0.0581	1.3000e-004		6.1600e-003	6.1600e-003		5.6700e-003	5.6700e-003	0.0000	11.1506	11.1506	3.6100e-003	0.0000	11.2408
Total	0.0122	0.1358	0.0581	1.3000e-004	0.0439	6.1600e-003	0.0501	0.0227	5.6700e-003	0.0284	0.0000	11.1506	11.1506	3.6100e-003	0.0000	11.2408

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3.3 Grading - 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	5.3800e-003	0.1847	0.0301	5.4000e-004	0.0112	6.4000e-004	0.0118	3.0800e-003	6.1000e-004	3.6900e-003	0.0000	51.7678	51.7678	1.7300e-003	0.0000	51.8111	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	2.5000e-004	1.7000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4880	0.4880	1.0000e-005	0.0000	0.4883	
Total	5.6300e-003	0.1848	0.0319	5.5000e-004	0.0118	6.4000e-004	0.0124	3.2300e-003	6.1000e-004	3.8400e-003	0.0000	52.2558	52.2558	1.7400e-003	0.0000	52.2994	

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					0.0439	0.0000	0.0439	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1358	0.0581	1.3000e-004		6.1600e-003	6.1600e-003		5.6700e-003	5.6700e-003	0.0000	11.1506	11.1506	3.6100e-003	0.0000	11.2408
Total	0.0122	0.1358	0.0581	1.3000e-004	0.0439	6.1600e-003	0.0501	0.0227	5.6700e-003	0.0284	0.0000	11.1506	11.1506	3.6100e-003	0.0000	11.2408

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3.3 Grading - 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	5.3800e-003	0.1847	0.0301	5.4000e-004	0.0112	6.4000e-004	0.0118	3.0800e-003	6.1000e-004	3.6900e-003	0.0000	51.7678	51.7678	1.7300e-003	0.0000	51.8111	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	2.5000e-004	1.7000e-004	1.8700e-003	1.0000e-005	5.7000e-004	0.0000	5.7000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4880	0.4880	1.0000e-005	0.0000	0.4883	
Total	5.6300e-003	0.1848	0.0319	5.5000e-004	0.0118	6.4000e-004	0.0124	3.2300e-003	6.1000e-004	3.8400e-003	0.0000	52.2558	52.2558	1.7400e-003	0.0000	52.2994	

3.4 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	0.0792	0.5767	0.5143	8.6000e-004		0.0310	0.0310		0.0300	0.0300	0.0000	70.8014	70.8014	0.0131	0.0000	71.1300	
Total	0.0792	0.5767	0.5143	8.6000e-004		0.0310	0.0310		0.0300	0.0300	0.0000	70.8014	70.8014	0.0131	0.0000	71.1300	

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3.4 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	1.8700e-003	0.0603	0.0119	1.5000e-004	3.3100e-004	2.6000e-004	3.5700e-003	9.6000e-004	2.5000e-004	1.2100e-003	0.0000	13.9950	13.9950	6.9000e-004	0.0000	14.0121	
Worker	4.3200e-003	3.0200e-003	0.0324	9.0000e-005	9.8000e-003	7.0000e-005	9.8700e-003	2.6100e-003	6.0000e-005	2.6700e-003	0.0000	8.4588	8.4588	2.1000e-004	0.0000	8.4640	
Total	6.1900e-003	0.0633	0.0443	2.4000e-004	0.0131	3.3000e-004	0.0134	3.5700e-003	3.1000e-004	3.8800e-003	0.0000	22.4538	22.4538	9.0000e-004	0.0000	22.4761	

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	0.0792	0.5767	0.5143	8.6000e-004		0.0310	0.0310		0.0300	0.0300	0.0000	70.8014	70.8014	0.0131	0.0000	71.1299	
Total	0.0792	0.5767	0.5143	8.6000e-004		0.0310	0.0310		0.0300	0.0300	0.0000	70.8014	70.8014	0.0131	0.0000	71.1299	

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3.4 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	1.8700e-003	0.0603	0.0119	1.5000e-004	3.3100e-004	2.6000e-004	3.5700e-003	9.6000e-004	2.5000e-004	1.2100e-003	0.0000	13.9950	13.9950	6.9000e-004	0.0000	14.0121	
Worker	4.3200e-003	3.0200e-003	0.0324	9.0000e-005	9.8000e-003	7.0000e-005	9.8700e-003	2.6100e-003	6.0000e-005	2.6700e-003	0.0000	8.4588	8.4588	2.1000e-004	0.0000	8.4640	
Total	6.1900e-003	0.0633	0.0443	2.4000e-004	0.0131	3.3000e-004	0.0134	3.5700e-003	3.1000e-004	3.8800e-003	0.0000	22.4538	22.4538	9.0000e-004	0.0000	22.4761	

3.4 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	0.0381	0.2864	0.2709	4.6000e-004		0.0144	0.0144		0.0139	0.0139	0.0000	38.1250	38.1250	6.8100e-003	0.0000	38.2952
Total	0.0381	0.2864	0.2709	4.6000e-004		0.0144	0.0144		0.0139	0.0139	0.0000	38.1250	38.1250	6.8100e-003	0.0000	38.2952

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3.4 Building Construction - 2021**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	8.4000e-004	0.0298	5.6900e-003	8.0000e-005	1.7800e-005	7.0000e-005	1.8500e-003	5.2000e-004	7.0000e-005	5.8000e-004	0.0000	7.4760	7.4760	3.5000e-004	0.0000	7.4847	
Worker	2.1700e-003	1.4600e-003	0.0160	5.0000e-005	5.2800e-003	3.0000e-005	5.3100e-003	1.4000e-003	3.0000e-005	1.4400e-003	0.0000	4.3945	4.3945	1.0000e-004	0.0000	4.3970	
Total	3.0100e-003	0.0313	0.0216	1.3000e-004	7.0600e-003	1.0000e-004	7.1600e-003	1.9200e-003	1.0000e-004	2.0200e-003	0.0000	11.8705	11.8705	4.5000e-004	0.0000	11.8817	

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	0.0381	0.2864	0.2709	4.6000e-004			0.0144	0.0144		0.0139	0.0139	0.0000	38.1250	38.1250	6.8100e-003	0.0000	38.2951
Total	0.0381	0.2864	0.2709	4.6000e-004			0.0144	0.0144		0.0139	0.0139	0.0000	38.1250	38.1250	6.8100e-003	0.0000	38.2951

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3.4 Building Construction - 2021**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	8.4000e-004	0.0298	5.6900e-003	8.0000e-005	1.7800e-003	7.0000e-005	1.8500e-003	5.2000e-004	7.0000e-005	5.8000e-004	0.0000	7.4760	7.4760	3.5000e-004	0.0000	7.4847	
Worker	2.1700e-003	1.4600e-003	0.0160	5.0000e-005	5.2800e-003	3.0000e-005	5.3100e-003	1.4000e-003	3.0000e-005	1.4400e-003	0.0000	4.3945	4.3945	1.0000e-004	0.0000	4.3970	
Total	3.0100e-003	0.0313	0.0216	1.3000e-004	7.0600e-003	1.0000e-004	7.1600e-003	1.9200e-003	1.0000e-004	2.0200e-003	0.0000	11.8705	11.8705	4.5000e-004	0.0000	11.8817	

3.5 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	1.6800e-003	0.0169	0.0178	3.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	2.3531	2.3531	7.5000e-004	0.0000	2.3718
Paving	1.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3000e-003	0.0169	0.0178	3.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	2.3531	2.3531	7.5000e-004	0.0000	2.3718

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3.5 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	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.0000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1762	0.1762	0.0000	0.0000	0.1763
Total	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.0000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1762	0.1762	0.0000	0.0000	0.1763

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	1.6800e-003	0.0169	0.0178	3.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	2.3531	2.3531	7.5000e-004	0.0000	2.3718
Paving	1.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.3000e-003	0.0169	0.0178	3.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	2.3531	2.3531	7.5000e-004	0.0000	2.3718

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3.5 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	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.0000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1762	0.1762	0.0000	0.0000	0.1763	
Total	9.0000e-005	6.0000e-005	6.7000e-004	0.0000	2.0000e-004	0.0000	2.1000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.1762	0.1762	0.0000	0.0000	0.1763	

3.6 Architectural Coating - 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						
Archit. Coating	0.1245						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Off-Road	6.6000e-004	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673	
Total	0.1251	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673	

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3.6 Architectural Coating - 2021**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	6.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178
Total	6.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178

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	0.1245						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6000e-004	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673
Total	0.1251	4.5800e-003	5.4500e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	0.7660	0.7660	5.0000e-005	0.0000	0.7673

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3.6 Architectural Coating - 2021**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	6.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178	
Total	6.0000e-005	4.0000e-005	4.3000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1177	0.1177	0.0000	0.0000	0.1178	

3.7 Utilities/Trenching - 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	0.0132	0.1251	0.1231	1.8000e-004		8.0400e-003	8.0400e-003		7.3900e-003	7.3900e-003	0.0000	15.3851	15.3851	4.9800e-003	0.0000	15.5095
Total	0.0132	0.1251	0.1231	1.8000e-004		8.0400e-003	8.0400e-003		7.3900e-003	7.3900e-003	0.0000	15.3851	15.3851	4.9800e-003	0.0000	15.5095

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3.7 Utilities/Trenching - 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	4.2000e-004	2.9000e-004	3.1200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8134	0.8134	2.0000e-005	0.0000	0.8139	
Total	4.2000e-004	2.9000e-004	3.1200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8134	0.8134	2.0000e-005	0.0000	0.8139	

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	0.0132	0.1251	0.1231	1.8000e-004		8.0400e-003	8.0400e-003		7.3900e-003	7.3900e-003	0.0000	15.3851	15.3851	4.9800e-003	0.0000	15.5095
Total	0.0132	0.1251	0.1231	1.8000e-004		8.0400e-003	8.0400e-003		7.3900e-003	7.3900e-003	0.0000	15.3851	15.3851	4.9800e-003	0.0000	15.5095

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3.7 Utilities/Trenching - 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	4.2000e-004	2.9000e-004	3.1200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8134	0.8134	2.0000e-005	0.0000	0.8139	
Total	4.2000e-004	2.9000e-004	3.1200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8134	0.8134	2.0000e-005	0.0000	0.8139	

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	0.0173	0.2195	0.1764	9.0000e-004	0.0487	7.9000e-004	0.0495	0.0132	7.5000e-004	0.0140	0.0000	83.6136	83.6136	3.5800e-003	0.0000	83.7030	
Unmitigated	0.0173	0.2195	0.1764	9.0000e-004	0.0487	7.9000e-004	0.0495	0.0132	7.5000e-004	0.0140	0.0000	83.6136	83.6136	3.5800e-003	0.0000	83.7030	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.22	3.22	3.22	9,396	9,396
General Light Industry	2.77	2.77	2.77	8,093	8,093
General Office Building	29.12	29.12	29.12	69,589	69,589
General Office Building	8.39	8.39	8.39	20,054	20,054
General Office Building	8.49	8.49	8.49	20,285	20,285
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	51.99	51.99	51.99	127,417	127,417

4.3 Trip Type Information

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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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232
Other Asphalt Surfaces	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

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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					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	62.1603	62.1603	2.8100e-003	5.8000e-004	62.4039
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	67.4262	67.4262	3.0500e-003	6.3000e-004	67.6904
NaturalGas Mitigated	1.6900e-003	0.0153	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.6987	16.6987	3.2000e-004	3.1000e-004	16.7980
NaturalGas Unmitigated	2.4000e-003	0.0218	0.0183	1.3000e-004		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	23.7090	23.7090	4.5000e-004	4.3000e-004	23.8499

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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	114822	6.2000e-004	5.6300e-003	4.7300e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.1274	6.1274	1.2000e-004	1.1000e-004	6.1638	
General Light Industry	133313	7.2000e-004	6.5300e-003	5.4900e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004	0.0000	7.1141	7.1141	1.4000e-004	1.3000e-004	7.1564	
General Office Building	124174	6.7000e-004	6.0900e-003	5.1100e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.6264	6.6264	1.3000e-004	1.2000e-004	6.6658	
General Office Building	35784	1.9000e-004	1.7500e-003	1.4700e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9096	1.9096	4.0000e-005	4.0000e-005	1.9209	
General Office Building	36195.5	2.0000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9315	1.9315	4.0000e-005	4.0000e-005	1.9430	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total		2.4000e-003	0.0218	0.0183	1.3000e-004		1.6500e-003	1.6500e-003		1.6500e-003	1.6500e-003	0.0000	23.7090	23.7090	4.7000e-004	4.4000e-004	23.8499	

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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	80486.6	4.3000e-004	3.9500e-003	3.3100e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.2951	4.2951	8.0000e-005	8.0000e-005	4.3206	
General Light Industry	93448	5.0000e-004	4.5800e-003	3.8500e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	4.9867	4.9867	1.0000e-004	9.0000e-005	5.0164	
General Office Building	25355.4	1.4000e-004	1.2400e-003	1.0400e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3531	1.3531	3.0000e-005	2.0000e-005	1.3611	
General Office Building	25646.9	1.4000e-004	1.2600e-003	1.0600e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.3686	1.3686	3.0000e-005	3.0000e-005	1.3768	
General Office Building	87985.7	4.7000e-004	4.3100e-003	3.6200e-003	3.0000e-005		3.3000e-004	3.3000e-004		3.3000e-004	3.3000e-004	0.0000	4.6953	4.6953	9.0000e-005	9.0000e-005	4.7232	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total		1.6800e-003	0.0153	0.0129	1.0000e-004		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.6987	16.6987	3.3000e-004	3.1000e-004	16.7980	

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	52052	15.1425	6.8000e-004	1.4000e-004	15.2019
General Light Industry	60434.4	17.5811	7.9000e-004	1.6000e-004	17.6500
General Office Building	21761.7	6.3307	2.9000e-004	6.0000e-005	6.3556
General Office Building	22012	6.4035	2.9000e-004	6.0000e-005	6.4286
General Office Building	75515.4	21.9683	9.9000e-004	2.1000e-004	22.0544
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		67.4262	3.0400e-003	6.3000e-004	67.6904

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	49002.8	14.2555	6.4000e-004	1.3000e-004	14.3113
General Light Industry	56894.2	16.5512	7.5000e-004	1.5000e-004	16.6160
General Office Building	19661.7	5.7198	2.6000e-004	5.0000e-005	5.7422
General Office Building	19887.8	5.7856	2.6000e-004	5.0000e-005	5.8083
General Office Building	68227.9	19.8483	9.0000e-004	1.9000e-004	19.9261
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		62.1603	2.8100e-003	5.7000e-004	62.4039

6.0 Area Detail

6.1 Mitigation Measures Area

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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	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003	
Unmitigated	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003	

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Total	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003

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	0.0124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003
Total	0.1145	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4200e-003	1.4200e-003	0.0000	0.0000	1.5100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.1507	0.1698	4.0900e-003	16.6126
Unmitigated	11.1507	0.1698	4.0900e-003	16.6126

7.2 Water by Land Use**Unmitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.07794 / 0	5.8215	0.1005	2.4100e-003	9.0536
General Office Building	2.11859 / 1.29849	5.3292	0.0692	1.6700e-003	7.5590
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		11.1507	0.1698	4.0800e-003	16.6126

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.07794 / 0	5.8215	0.1005	2.4100e- 003	9.0536
General Office Building	2.11859 / 1.29849	5.3292	0.0692	1.6700e- 003	7.5590
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		11.1507	0.1698	4.0800e- 003	16.6126

8.0 Waste Detail

8.1 Mitigation Measures Waste

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.6005	0.3310	0.0000	13.8751
Unmitigated	5.6005	0.3310	0.0000	13.8751

8.2 Waste by Land UseUnmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	16.5	3.3494	0.1979	0.0000	8.2979
General Office Building	11.09	2.2512	0.1330	0.0000	5.5772
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		5.6005	0.3310	0.0000	13.8751

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	16.5	3.3494	0.1979	0.0000	8.2979
General Office Building	11.09	2.2512	0.1330	0.0000	5.5772
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		5.6005	0.3310	0.0000	13.8751

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

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

J.D. Pasquetti Engineering Inc. Headquarters

Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.54	1000sqft	0.17	7,544.00	0
General Office Building	2.17	1000sqft	0.05	2,174.00	0
General Light Industry	7.15	1000sqft	0.16	7,152.00	0
General Light Industry	6.16	1000sqft	0.14	6,160.00	0
Other Asphalt Surfaces	54.00	1000sqft	1.24	54,000.00	0
General Office Building	2.20	1000sqft	0.05	2,199.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2021
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

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

Project Characteristics -

Land Use - Main Office Building: 6539 sf + 1005 sf (mezz) = 7544 sf

Warehouse/Office: 6160 sf (warehouse) + 2199 sf (office)

Shop/Office: 7152 sf (shop) + 2174 sf (office)

Construction Phase - Jason Pasquetti, 2019.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Utilities/Trenching phase added

Grading - Soil and aggregate import

Vehicle Trips - Jason Pasquetti, 2019. 15 employee round trips, 8 visitor/customer round trips and 3 heavy truck round trips per day.

Fleet Mix - 3 heavy truck round trips per day

Energy Mitigation - 2019 Standards will exceed 2016 Standards by 30% for non residential buildings

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	10.00	4.00
tblConstructionPhase	NumDays	200.00	120.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	7/8/2020	7/28/2020
tblConstructionPhase	PhaseEndDate	4/28/2021	9/14/2020
tblConstructionPhase	PhaseEndDate	4/14/2021	3/1/2021
tblConstructionPhase	PhaseEndDate	5/12/2021	3/9/2021
tblConstructionPhase	PhaseStartDate	4/15/2021	9/9/2020
tblConstructionPhase	PhaseStartDate	7/9/2020	9/15/2020
tblConstructionPhase	PhaseStartDate	4/29/2021	3/2/2021
tblFleetMix	HHD	0.05	0.50
tblFleetMix	LDA	0.49	0.00

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.22	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2840e-003	0.00
tblFleetMix	MCY	5.9610e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.2320e-003	0.00
tblFleetMix	MHD	0.03	0.50
tblFleetMix	OBUS	1.4460e-003	0.00
tblFleetMix	SBUS	7.7300e-004	0.00
tblFleetMix	UBUS	1.2050e-003	0.00
tblGrading	AcresOfGrading	6.75	5.05
tblGrading	AcresOfGrading	1.00	5.05
tblGrading	MaterialImported	0.00	10,650.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblVehicleTrips	ST_TR	1.32	0.45
tblVehicleTrips	ST_TR	2.46	3.86
tblVehicleTrips	SU_TR	0.68	0.45
tblVehicleTrips	SU_TR	1.05	3.86
tblVehicleTrips	WD_TR	6.97	0.45
tblVehicleTrips	WD_TR	11.03	3.86

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					
2020	2.2015	35.1044	14.4045	0.0759	8.0128	0.8214	8.8342	3.2030	0.7768	3.9587	0.0000	7,834.1811	7,834.1811	0.6443	0.0000	7,850.2880
2021	41.7231	15.0986	14.0067	0.0284	0.3509	0.6891	1.0401	0.0951	0.6653	0.7604	0.0000	2,652.0426	2,652.0426	0.3803	0.0000	2,661.5496
Maximum	41.7231	35.1044	14.4045	0.0759	8.0128	0.8214	8.8342	3.2030	0.7768	3.9587	0.0000	7,834.1811	7,834.1811	0.6443	0.0000	7,850.2880

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					
2020	2.2015	35.1044	14.4045	0.0759	8.0128	0.8214	8.8342	3.2030	0.7768	3.9587	0.0000	7,834.1811	7,834.1811	0.6443	0.0000	7,850.2880
2021	41.7231	15.0986	14.0067	0.0284	0.3509	0.6891	1.0401	0.0951	0.6653	0.7604	0.0000	2,652.0426	2,652.0426	0.3803	0.0000	2,661.5496
Maximum	41.7231	35.1044	14.4045	0.0759	8.0128	0.8214	8.8342	3.2030	0.7768	3.9587	0.0000	7,834.1811	7,834.1811	0.6443	0.0000	7,850.2880

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005			0.0185
Energy	0.0131	0.1193	0.1002	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	143.2037	143.2037	2.7400e-003	2.6300e-003		144.0547
Mobile	0.1105	1.1830	1.0098	5.1600e-003	0.2791	4.3200e-003	0.2834	0.0757	4.0800e-003	0.0797	529.5549	529.5549	0.0211			530.0823
Total	0.7516	1.3025	1.1182	5.8800e-003	0.2791	0.0134	0.2925	0.0757	0.0132	0.0888	672.7760	672.7760	0.0239	2.6300e-003	674.1555	

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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005			0.0185
Energy	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9300e-003	1.8500e-003		101.4608
Mobile	0.1105	1.1830	1.0098	5.1600e-003	0.2791	4.3200e-003	0.2834	0.0757	4.0800e-003	0.0797	529.5549	529.5549	0.0211			530.0823
Total	0.7477	1.2672	1.0886	5.6600e-003	0.2791	0.0107	0.2898	0.0757	0.0105	0.0862	630.4337	630.4337	0.0231	1.8500e-003	631.5616	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

	ROG	NOx	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	0.52	2.71	2.65	3.74	0.00	19.97	0.92	0.00	20.33	3.02	0.00	6.29	6.29	3.39	29.66	6.32

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/2/2020	5	2	
2	Grading	Grading	7/3/2020	7/28/2020	5	18	
3	Building Construction	Building Construction	9/15/2020	3/1/2021	5	120	
4	Paving	Paving	9/9/2020	9/14/2020	5	4	
5	Architectural Coating	Architectural Coating	3/2/2021	3/9/2021	5	6	
6	Utilities/Trenching	Trenching	7/29/2020	9/8/2020	5	30	

Acres of Grading (Site Preparation Phase): 5.05

Acres of Grading (Grading Phase): 5.05

Acres of Paving: 1.24

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,844; Non-Residential Outdoor: 12,615; Striped Parking Area: 3,240 (Architectural Coating – sqft)

OffRoad Equipment

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Utilities/Trenching	Trenchers	1	8.00	78	0.50
Utilities/Trenching	Excavators	1	8.00	158	0.38

Trips and VMT

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,331.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities/Trenching	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust					7.9471	0.0000	7.9471	3.1856	0.0000	3.1856			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	7.9471	0.8210	8.7680	3.1856	0.7553	3.9409		1,667.4119	1,667.4119	0.5393		1,680.8937

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.2 Site Preparation - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332
Total	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.9471	0.0000	7.9471	3.1856	0.0000	3.1856	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	11,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	7.9471	0.8210	8.7680	3.1856	0.7553	3.9409	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.2 Site Preparation - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332
Total	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178		65.4930	65.4930	1.6100e-003		65.5332

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					4.8810	0.0000	4.8810	2.5249	0.0000	2.5249		0.0000				0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	1,365.718 3	1,365.718 3	0.4417			1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	4.8810	0.6844	5.5654	2.5249	0.6296	3.1546		1,365.718 3	1,365.718 3	0.4417		1,376.760 9

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.3 Grading - 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	lb/day										lb/day					
Hauling	0.5883	20.0019	3.1550	0.0611	1.2936	0.0699	1.3635	0.3546	0.0669	0.4215	6,402.969 8	6,402.969 8	0.2010			6,407.993 9
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	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332
Total	0.6194	20.0190	3.3898	0.0618	1.3593	0.0704	1.4297	0.3720	0.0673	0.4394	6,468.462 7	6,468.462 7	0.2026			6,473.527 1

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8810	0.0000	4.8810	2.5249	0.0000	2.5249			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	4.8810	0.6844	5.5654	2.5249	0.6296	3.1546	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.3 Grading - 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	lb/day											lb/day					
Hauling	0.5883	20.0019	3.1550	0.0611	1.2936	0.0699	1.3635	0.3546	0.0669	0.4215	6,402.969 8	6,402.969 8	0.2010			6,407.993 9	
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	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332	
Total	0.6194	20.0190	3.3898	0.0618	1.3593	0.0704	1.4297	0.3720	0.0673	0.4394	6,468.462 7	6,468.462 7	0.2026			6,473.527 1	

3.4 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	lb/day											lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	2,001.159 5	2,001.159 5	0.3715			2,010.446 7	
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	2,001.159 5	2,001.159 5	0.3715			2,010.446 7	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.4 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0467	1.5232	0.2774	3.8300e-003	0.0881	6.6800e-003	0.0947	0.0254	6.3900e-003	0.0317	401.2121	401.2121	0.0183			401.6693
Worker	0.1243	0.0683	0.9390	2.6300e-003	0.2629	1.6700e-003	0.2645	0.0697	1.5400e-003	0.0713	261.9720	261.9720	6.4300e-003			262.1328
Total	0.1710	1.5915	1.2164	6.4600e-003	0.3509	8.3500e-003	0.3593	0.0951	7.9300e-003	0.1030		663.1841	663.1841	0.0247		663.8021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.4 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	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0467	1.5232	0.2774	3.8300e-003	0.0881	6.6800e-003	0.0947	0.0254	6.3900e-003	0.0317	401.2121	401.2121	0.0183			401.6693	
Worker	0.1243	0.0683	0.9390	2.6300e-003	0.2629	1.6700e-003	0.2645	0.0697	1.5400e-003	0.0713	261.9720	261.9720	6.4300e-003			262.1328	
Total	0.1710	1.5915	1.2164	6.4600e-003	0.3509	8.3500e-003	0.3593	0.0951	7.9300e-003	0.1030	663.1841	663.1841	0.0247			663.8021	

3.4 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	2,001.2200	2,001.2200	0.3573			2,010.1517	
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	2,001.2200	2,001.2200	0.3573			2,010.1517	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.4 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0390	1.4014	0.2453	3.8000e-003	0.0881	3.1800e-003	0.0912	0.0254	3.0400e-003	0.0284	398.0750	398.0750	0.0173			398.5062	
Worker	0.1156	0.0612	0.8620	2.5400e-003	0.2629	1.6300e-003	0.2645	0.0697	1.5000e-003	0.0712	252.7476	252.7476	5.7600e-003			252.8917	
Total	0.1546	1.4626	1.1073	6.3400e-003	0.3509	4.8100e-003	0.3557	0.0951	4.5400e-003	0.0996	650.8226	650.8226	0.0230			651.3979	

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.220	2,001.220	0.3573		2,010.151	
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.220	2,001.220	0.3573		2,010.151	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.4 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0390	1.4014	0.2453	3.8000e-003	0.0881	3.1800e-003	0.0912	0.0254	3.0400e-003	0.0284	398.0750	398.0750	0.0173			398.5062
Worker	0.1156	0.0612	0.8620	2.5400e-003	0.2629	1.6300e-003	0.2645	0.0697	1.5000e-003	0.0712	252.7476	252.7476	5.7600e-003			252.8917
Total	0.1546	1.4626	1.1073	6.3400e-003	0.3509	4.8100e-003	0.3557	0.0951	4.5400e-003	0.0996		650.8226	650.8226	0.0230		651.3979

3.5 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	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	1,296.946 1	1,296.946 1	0.4111			1,307.224 6
Paving	0.8122					0.0000	0.0000		0.0000	0.0000		0.0000				0.0000
Total	1.6524	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	1,296.946 1	1,296.946 1	0.4111			1,307.224 6

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.5 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0278	0.3815	1.0700e-003	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290	106.4261	106.4261	2.6100e-003	106.4915		
Total	0.0505	0.0278	0.3815	1.0700e-003	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290		106.4261	106.4261	2.6100e-003		106.4915

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.946	1,296.946	0.4111		1,307.224
Paving	0.8122					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000
Total	1.6524	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.946	1,296.946	0.4111		1,307.224

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.5 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0505	0.0278	0.3815	1.0700e-003	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290	106.4261	106.4261	2.6100e-003	106.4915		
Total	0.0505	0.0278	0.3815	1.0700e-003	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290		106.4261	106.4261	2.6100e-003		106.4915

3.6 Architectural Coating - 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					
Archit. Coating	41.4825						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	41.7014	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.6 Architectural Coating - 2021**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	0.0217	0.0115	0.1616	4.8000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134		47.3902	47.3902	1.0800e-003		47.4172	
Total	0.0217	0.0115	0.1616	4.8000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134		47.3902	47.3902	1.0800e-003		47.4172	

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	41.4825						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000	
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309	
Total	41.7014	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0217	0.0115	0.1616	4.8000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134	47.3902	47.3902	1.0800e-003			47.4172
Total	0.0217	0.0115	0.1616	4.8000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134		47.3902	47.3902	1.0800e-003		47.4172

3.7 Utilities/Trenching - 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	lb/day										lb/day					
Off-Road	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	1,130.614 3	1,130.614 3	0.3657			1,139.755 9
Total	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928		1,130.614 3	1,130.614 3	0.3657		1,139.755 9

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.7 Utilities/Trenching - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332
Total	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	0.0000	1,130.6143	1,130.6143	0.3657		1,139.7559
Total	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	0.0000	1,130.6143	1,130.6143	0.3657		1,139.7559

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

3.7 Utilities/Trenching - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	65.4930	65.4930	1.6100e-003			65.5332
Total	0.0311	0.0171	0.2348	6.6000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178		65.4930	65.4930	1.6100e-003		65.5332

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1105	1.1830	1.0098	5.1600e-003	0.2791	4.3200e-003	0.2834	0.0757	4.0800e-003	0.0797	529.5549	529.5549	0.0211			530.0823	
Unmitigated	0.1105	1.1830	1.0098	5.1600e-003	0.2791	4.3200e-003	0.2834	0.0757	4.0800e-003	0.0797	529.5549	529.5549	0.0211			530.0823	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.22	3.22	3.22	9,396	9,396
General Light Industry	2.77	2.77	2.77	8,093	8,093
General Office Building	29.12	29.12	29.12	69,589	69,589
General Office Building	8.39	8.39	8.39	20,054	20,054
General Office Building	8.49	8.49	8.49	20,285	20,285
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	51.99	51.99	51.99	127,417	127,417

4.3 Trip Type Information

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232
Other Asphalt Surfaces	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9300e-003	1.8500e-003	101.4608	
NaturalGas Unmitigated	0.0131	0.1193	0.1002	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	143.2037	143.2037	2.7400e-003	2.6300e-003	144.0547	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

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					
General Light Industry	314.582	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003		37.0096	37.0096	7.1000e-004	6.8000e-004	37.2296	
General Light Industry	365.242	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003	2.7200e-003	2.7200e-003		42.9696	42.9696	8.2000e-004	7.9000e-004	43.2250	
General Office Building	340.203	3.6700e-003	0.0334	0.0280	2.0000e-004		2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003		40.0239	40.0239	7.7000e-004	7.3000e-004	40.2618	
General Office Building	98.0385	1.0600e-003	9.6100e-003	8.0700e-003	6.0000e-005		7.3000e-004	7.3000e-004	7.3000e-004	7.3000e-004		11.5339	11.5339	2.2000e-004	2.1000e-004	11.6025	
General Office Building	99.1659	1.0700e-003	9.7200e-003	8.1700e-003	6.0000e-005		7.4000e-004	7.4000e-004	7.4000e-004	7.4000e-004		11.6666	11.6666	2.2000e-004	2.1000e-004	11.7359	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	
Total		0.0131	0.1193	0.1003	7.2000e-004		9.0600e-003	9.0600e-003		9.0600e-003	9.0600e-003		143.2037	143.2037	2.7400e-003	2.6200e-003	144.0547

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

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	lb/day										lb/day					
General Light Industry	0.220511	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	25.9425	25.9425	5.0000e-004	4.8000e-004	26.0967	
General Light Industry	0.256022	2.7600e-003	0.0251	0.0211	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	30.1202	30.1202	5.8000e-004	5.5000e-004	30.2992	
General Office Building	0.0694667	7.5000e-004	6.8100e-003	5.7200e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	8.1726	8.1726	1.6000e-004	1.5000e-004	8.2211	
General Office Building	0.0702656	7.6000e-004	6.8900e-003	5.7900e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	8.2665	8.2665	1.6000e-004	1.5000e-004	8.3157	
General Office Building	0.241057	2.6000e-003	0.0236	0.0199	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	28.3596	28.3596	5.4000e-004	5.2000e-004	28.5281	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total		9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9400e-003	1.8500e-003	101.4608	

6.0 Area Detail

6.1 Mitigation Measures Area

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005		0.0185		
Unmitigated	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005		0.0185		

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	0.0682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5590					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185
Total	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0682						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Consumer Products	0.5590						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185
Total	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Summer

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

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

J.D. Pasquetti Engineering Inc. Headquarters

Placer-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	7.54	1000sqft	0.17	7,544.00	0
General Office Building	2.17	1000sqft	0.05	2,174.00	0
General Light Industry	7.15	1000sqft	0.16	7,152.00	0
General Light Industry	6.16	1000sqft	0.14	6,160.00	0
Other Asphalt Surfaces	54.00	1000sqft	1.24	54,000.00	0
General Office Building	2.20	1000sqft	0.05	2,199.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	2			Operational Year	2021
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

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

Project Characteristics -

Land Use - Main Office Building: 6539 sf + 1005 sf (mezz) = 7544 sf

Warehouse/Office: 6160 sf (warehouse) + 2199 sf (office)

Shop/Office: 7152 sf (shop) + 2174 sf (office)

Construction Phase - Jason Pasquetti, 2019.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Utilities/Trenching phase added

Grading - Soil and aggregate import

Vehicle Trips - Jason Pasquetti, 2019. 15 employee round trips, 8 visitor/customer round trips and 3 heavy truck round trips per day.

Fleet Mix - 3 heavy truck round trips per day

Energy Mitigation - 2019 Standards will exceed 2016 Standards by 30% for non residential buildings

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	4.00	18.00
tblConstructionPhase	NumDays	10.00	4.00
tblConstructionPhase	NumDays	200.00	120.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	PhaseEndDate	7/8/2020	7/28/2020
tblConstructionPhase	PhaseEndDate	4/28/2021	9/14/2020
tblConstructionPhase	PhaseEndDate	4/14/2021	3/1/2021
tblConstructionPhase	PhaseEndDate	5/12/2021	3/9/2021
tblConstructionPhase	PhaseStartDate	4/15/2021	9/9/2020
tblConstructionPhase	PhaseStartDate	7/9/2020	9/15/2020
tblConstructionPhase	PhaseStartDate	4/29/2021	3/2/2021
tblFleetMix	HHD	0.05	0.50
tblFleetMix	LDA	0.49	0.00

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.22	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2840e-003	0.00
tblFleetMix	MCY	5.9610e-003	0.00
tblFleetMix	MDV	0.13	0.00
tblFleetMix	MH	1.2320e-003	0.00
tblFleetMix	MHD	0.03	0.50
tblFleetMix	OBUS	1.4460e-003	0.00
tblFleetMix	SBUS	7.7300e-004	0.00
tblFleetMix	UBUS	1.2050e-003	0.00
tblGrading	AcresOfGrading	6.75	5.05
tblGrading	AcresOfGrading	1.00	5.05
tblGrading	MaterialImported	0.00	10,650.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblVehicleTrips	ST_TR	1.32	0.45
tblVehicleTrips	ST_TR	2.46	3.86
tblVehicleTrips	SU_TR	0.68	0.45
tblVehicleTrips	SU_TR	1.05	3.86
tblVehicleTrips	WD_TR	6.97	0.45
tblVehicleTrips	WD_TR	11.03	3.86

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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	
2020	2.2002	35.6145	14.3656	0.0744	8.0128	0.8214	8.8342	3.2030	0.7769	3.9587	0.0000	7,678.181 7	7,678.181 7	0.6693	0.0000	7,694.914 0	
2021	41.7224	15.1238	13.9671	0.0280	0.3509	0.6893	1.0402	0.0951	0.6655	0.7606	0.0000	2,610.860 3	2,610.860 3	0.3821	0.0000	2,620.4114	
Maximum	41.7224	35.6145	14.3656	0.0744	8.0128	0.8214	8.8342	3.2030	0.7769	3.9587	0.0000	7,678.181 7	7,678.181 7	0.6693	0.0000	7,694.914 0	

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	
2020	2.2002	35.6145	14.3656	0.0744	8.0128	0.8214	8.8342	3.2030	0.7769	3.9587	0.0000	7,678.181 7	7,678.181 7	0.6693	0.0000	7,694.914 0	
2021	41.7224	15.1238	13.9671	0.0280	0.3509	0.6893	1.0402	0.0951	0.6655	0.7606	0.0000	2,610.860 3	2,610.860 3	0.3821	0.0000	2,620.4114	
Maximum	41.7224	35.6145	14.3656	0.0744	8.0128	0.8214	8.8342	3.2030	0.7769	3.9587	0.0000	7,678.181 7	7,678.181 7	0.6693	0.0000	7,694.914 0	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005			0.0185
Energy	0.0131	0.1193	0.1002	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	143.2037	143.2037	2.7400e-003	2.6300e-003		144.0547
Mobile	0.0934	1.2086	1.0221	4.8400e-003	0.2791	4.4400e-003	0.2835	0.0757	4.2000e-003	0.0799	496.2571	496.2571	0.0228			496.8268
Total	0.7345	1.3280	1.1304	5.5600e-003	0.2791	0.0135	0.2926	0.0757	0.0133	0.0890		639.4782	639.4782	0.0256	2.6300e-003	640.9000

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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005			0.0185
Energy	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9300e-003	1.8500e-003		101.4608
Mobile	0.0934	1.2086	1.0221	4.8400e-003	0.2791	4.4400e-003	0.2835	0.0757	4.2000e-003	0.0799	496.2571	496.2571	0.0228			496.8268
Total	0.7306	1.2927	1.1008	5.3400e-003	0.2791	0.0109	0.2899	0.0757	0.0106	0.0863		597.1359	597.1359	0.0248	1.8500e-003	598.3061

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

	ROG	NOx	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	0.53	2.66	2.62	3.96	0.00	19.79	0.92	0.00	20.15	3.01	0.00	6.62	6.62	3.17	29.66	6.65

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/1/2020	7/2/2020	5	2	
2	Grading	Grading	7/3/2020	7/28/2020	5	18	
3	Building Construction	Building Construction	9/15/2020	3/1/2021	5	120	
4	Paving	Paving	9/9/2020	9/14/2020	5	4	
5	Architectural Coating	Architectural Coating	3/2/2021	3/9/2021	5	6	
6	Utilities/Trenching	Trenching	7/29/2020	9/8/2020	5	30	

Acres of Grading (Site Preparation Phase): 5.05

Acres of Grading (Grading Phase): 5.05

Acres of Paving: 1.24

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 37,844; Non-Residential Outdoor: 12,615; Striped Parking Area: 3,240 (Architectural Coating – sqft)

OffRoad Equipment

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Utilities/Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Utilities/Trenching	Trenchers	1	8.00	78	0.50
Utilities/Trenching	Excavators	1	8.00	158	0.38

Trips and VMT

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	1,331.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	32.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Utilities/Trenching	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 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	lb/day										lb/day					
Fugitive Dust					7.9471	0.0000	7.9471	3.1856	0.0000	3.1856			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.411 9	1,667.4119	0.5393		1,680.893 7
Total	1.6299	18.3464	7.7093	0.0172	7.9471	0.8210	8.7680	3.1856	0.7553	3.9409		1,667.411 9	1,667.411	0.5393		1,680.893 7

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.2 Site Preparation - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425
Total	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425

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					7.9471	0.0000	7.9471	3.1856	0.0000	3.1856	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	7.9471	0.8210	8.7680	3.1856	0.7553	3.9409	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.2 Site Preparation - 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	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	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178			58.3060	58.3060	1.4600e-003	58.3425	
Total	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178			58.3060	58.3060	1.4600e-003	58.3425	

3.3 Grading - 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	lb/day										lb/day					
Fugitive Dust					4.8810	0.0000	4.8810	2.5249	0.0000	2.5249			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296			1,365.7183	1,365.7183	0.4417	1,376.7609
Total	1.3498	15.0854	6.4543	0.0141	4.8810	0.6844	5.5654	2.5249	0.6296	3.1546			1,365.7183	1,365.7183	0.4417	1,376.7609

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.3 Grading - 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	lb/day										lb/day					
Hauling	0.6111	20.5077	3.5802	0.0597	1.2936	0.0717	1.3653	0.3546	0.0686	0.4232	6,254.157 4	6,254.157 4	0.2261			6,259.810 6
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	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425
Total	0.6411	20.5291	3.7905	0.0603	1.3593	0.0721	1.4314	0.3720	0.0690	0.4410	6,312.463 4	6,312.463 4	0.2276			6,318.153 1

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8810	0.0000	4.8810	2.5249	0.0000	2.5249			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9
Total	1.3498	15.0854	6.4543	0.0141	4.8810	0.6844	5.5654	2.5249	0.6296	3.1546	0.0000	1,365.718 3	1,365.718 3	0.4417		1,376.760 9

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.3 Grading - 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	lb/day										lb/day					
Hauling	0.6111	20.5077	3.5802	0.0597	1.2936	0.0717	1.3653	0.3546	0.0686	0.4232	6,254.157 4	6,254.157 4	0.2261			6,259.810 6
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	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425
Total	0.6411	20.5291	3.7905	0.0603	1.3593	0.0721	1.4314	0.3720	0.0690	0.4410	6,312.463 4	6,312.463 4	0.2276			6,318.153 1

3.4 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	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	2,001.159 5	2,001.159 5	0.3715			2,010.446 7
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	2,001.159 5	2,001.159 5	0.3715			2,010.446 7

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.4 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	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	1.5390	0.3363	3.7100e-003	0.0881	6.8600e-003	0.0949	0.0254	6.5600e-003	0.0319			387.7558	387.7558	0.0207		388.2728
Worker	0.1202	0.0856	0.8412	2.3400e-003	0.2629	1.6700e-003	0.2645	0.0697	1.5400e-003	0.0713			233.2239	233.2239	5.8500e-003		233.3701
Total	0.1697	1.6246	1.1775	6.0500e-003	0.3509	8.5300e-003	0.3595	0.0951	8.1000e-003	0.1032			620.9797	620.9797	0.0265		621.6429

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467	
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.4 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0495	1.5390	0.3363	3.7100e-003	0.0881	6.8600e-003	0.0949	0.0254	6.5600e-003	0.0319	387.7558	387.7558	0.0207			388.2728
Worker	0.1202	0.0856	0.8412	2.3400e-003	0.2629	1.6700e-003	0.2645	0.0697	1.5400e-003	0.0713	233.2239	233.2239	5.8500e-003			233.3701
Total	0.1697	1.6246	1.1775	6.0500e-003	0.3509	8.5300e-003	0.3595	0.0951	8.1000e-003	0.1032	620.9797	620.9797	0.0265			621.6429

3.4 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	2,001.2200	2,001.2200	0.3573			2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	2,001.2200	2,001.2200	0.3573			2,010.1517

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0416	1.4110	0.3000	3.6800e-003	0.0881	3.3400e-003	0.0914	0.0254	3.1900e-003	0.0285	384.6198	384.6198	0.0196			385.1088	
Worker	0.1119	0.0767	0.7677	2.2600e-003	0.2629	1.6300e-003	0.2645	0.0697	1.5000e-003	0.0712	225.0205	225.0205	5.2200e-003			225.1510	
Total	0.1535	1.4877	1.0677	5.9400e-003	0.3509	4.9700e-003	0.3559	0.0951	4.6900e-003	0.0998	609.6403	609.6403	0.0248			610.2597	

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517	
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0416	1.4110	0.3000	3.6800e-003	0.0881	3.3400e-003	0.0914	0.0254	3.1900e-003	0.0285	384.6198	384.6198	0.0196			385.1088
Worker	0.1119	0.0767	0.7677	2.2600e-003	0.2629	1.6300e-003	0.2645	0.0697	1.5000e-003	0.0712	225.0205	225.0205	5.2200e-003			225.1510
Total	0.1535	1.4877	1.0677	5.9400e-003	0.3509	4.9700e-003	0.3559	0.0951	4.6900e-003	0.0998	609.6403	609.6403	0.0248			610.2597

3.5 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	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	1,296.9461	1,296.9461	0.4111			1,307.2246
Paving	0.8122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6524	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	1,296.9461	1,296.9461	0.4111			1,307.2246

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.5 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	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	0.0488	0.0348	0.3417	9.5000e-004	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290		94.7472	94.7472	2.3800e-003		94.8066	
Total	0.0488	0.0348	0.3417	9.5000e-004	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290		94.7472	94.7472	2.3800e-003		94.8066	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day											lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.946 1	1,296.946 1	0.4111		1,307.224 6	
Paving	0.8122					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Total	1.6524	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.946 1	1,296.946 1	0.4111		1,307.224 6	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.5 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0488	0.0348	0.3417	9.5000e-004	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290	94.7472	94.7472	2.3800e-003			94.8066
Total	0.0488	0.0348	0.3417	9.5000e-004	0.1068	6.8000e-004	0.1075	0.0283	6.3000e-004	0.0290		94.7472	94.7472	2.3800e-003		94.8066

3.6 Architectural Coating - 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					
Archit. Coating	41.4825						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	41.7014	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.6 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0210	0.0144	0.1440	4.2000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134	42.1913	42.1913	9.8000e-004			42.2158
Total	0.0210	0.0144	0.1440	4.2000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134		42.1913	42.1913	9.8000e-004		42.2158

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	41.4825						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	41.7014	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0210	0.0144	0.1440	4.2000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134	42.1913	42.1913	9.8000e-004			42.2158
Total	0.0210	0.0144	0.1440	4.2000e-004	0.0493	3.0000e-004	0.0496	0.0131	2.8000e-004	0.0134		42.1913	42.1913	9.8000e-004		42.2158

3.7 Utilities/Trenching - 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	lb/day										lb/day					
Off-Road	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	1,130.614 3	1,130.614 3	0.3657			1,139.755 9
Total	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928		1,130.614 3	1,130.614 3	0.3657		1,139.755 9

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.7 Utilities/Trenching - 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	lb/day											lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Worker	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425	
Total	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425	

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	0.0000	1,130.6143	1,130.6143	0.3657		1,139.7559
Total	0.8767	8.3369	8.2041	0.0117		0.5357	0.5357		0.4928	0.4928	0.0000	1,130.6143	1,130.6143	0.3657		1,139.7559

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

3.7 Utilities/Trenching - 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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178	58.3060	58.3060	1.4600e-003			58.3425
Total	0.0301	0.0214	0.2103	5.9000e-004	0.0657	4.2000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3060	58.3060	1.4600e-003		58.3425

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0934	1.2086	1.0221	4.8400e-003	0.2791	4.4400e-003	0.2835	0.0757	4.2000e-003	0.0799	496.2571	496.2571	0.0228			496.8268	
Unmitigated	0.0934	1.2086	1.0221	4.8400e-003	0.2791	4.4400e-003	0.2835	0.0757	4.2000e-003	0.0799	496.2571	496.2571	0.0228			496.8268	

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.22	3.22	3.22	9,396	9,396
General Light Industry	2.77	2.77	2.77	8,093	8,093
General Office Building	29.12	29.12	29.12	69,589	69,589
General Office Building	8.39	8.39	8.39	20,054	20,054
General Office Building	8.49	8.49	8.49	20,285	20,285
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	51.99	51.99	51.99	127,417	127,417

4.3 Trip Type Information

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.500000	0.500000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232
Other Asphalt Surfaces	0.494811	0.040252	0.220236	0.128508	0.023782	0.006284	0.029295	0.046215	0.001446	0.001205	0.005961	0.000773	0.001232

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9300e-003	1.8500e-003	101.4608	
NaturalGas Unmitigated	0.0131	0.1193	0.1002	7.2000e-004		9.0700e-003	9.0700e-003		9.0700e-003	9.0700e-003	143.2037	143.2037	2.7400e-003	2.6300e-003	144.0547	

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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					
General Light Industry	314.582	3.3900e-003	0.0308	0.0259	1.9000e-004		2.3400e-003	2.3400e-003	2.3400e-003	2.3400e-003		37.0096	37.0096	7.1000e-004	6.8000e-004	37.2296	
General Light Industry	365.242	3.9400e-003	0.0358	0.0301	2.1000e-004		2.7200e-003	2.7200e-003	2.7200e-003	2.7200e-003		42.9696	42.9696	8.2000e-004	7.9000e-004	43.2250	
General Office Building	340.203	3.6700e-003	0.0334	0.0280	2.0000e-004		2.5300e-003	2.5300e-003	2.5300e-003	2.5300e-003		40.0239	40.0239	7.7000e-004	7.3000e-004	40.2618	
General Office Building	98.0385	1.0600e-003	9.6100e-003	8.0700e-003	6.0000e-005		7.3000e-004	7.3000e-004	7.3000e-004	7.3000e-004		11.5339	11.5339	2.2000e-004	2.1000e-004	11.6025	
General Office Building	99.1659	1.0700e-003	9.7200e-003	8.1700e-003	6.0000e-005		7.4000e-004	7.4000e-004	7.4000e-004	7.4000e-004		11.6666	11.6666	2.2000e-004	2.1000e-004	11.7359	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	
Total		0.0131	0.1193	0.1003	7.2000e-004		9.0600e-003	9.0600e-003		9.0600e-003	9.0600e-003		143.2037	143.2037	2.7400e-003	2.6200e-003	144.0547

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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	lb/day										lb/day					
General Light Industry	0.220511	2.3800e-003	0.0216	0.0182	1.3000e-004		1.6400e-003	1.6400e-003		1.6400e-003	1.6400e-003	25.9425	25.9425	5.0000e-004	4.8000e-004	26.0967	
General Light Industry	0.256022	2.7600e-003	0.0251	0.0211	1.5000e-004		1.9100e-003	1.9100e-003		1.9100e-003	1.9100e-003	30.1202	30.1202	5.8000e-004	5.5000e-004	30.2992	
General Office Building	0.0694667	7.5000e-004	6.8100e-003	5.7200e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	8.1726	8.1726	1.6000e-004	1.5000e-004	8.2211	
General Office Building	0.0702656	7.6000e-004	6.8900e-003	5.7900e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	8.2665	8.2665	1.6000e-004	1.5000e-004	8.3157	
General Office Building	0.241057	2.6000e-003	0.0236	0.0199	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	28.3596	28.3596	5.4000e-004	5.2000e-004	28.5281	
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total		9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003	100.8614	100.8614	1.9400e-003	1.8500e-003	101.4608	

6.0 Area Detail

6.1 Mitigation Measures Area

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005		0.0185		
Unmitigated	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0173	0.0173	5.0000e-005		0.0185		

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	0.0682					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5590					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185
Total	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0682						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Consumer Products	0.5590						0.0000	0.0000		0.0000	0.0000		0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185
Total	0.6280	7.0000e-005	8.1200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0173	0.0173	5.0000e-005		0.0185

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

J.D. Pasquetti Engineering Inc. Headquarters - Placer-Sacramento County, Winter

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



June 4, 2020

Dan Jones
RCH Group

Subject: J.D. Pasquetti Engineering Inc. Headquarters Project

Dear Mr. Jones:

The Placer County Air Pollution Control District (District) thanks you for the opportunity to review and comment on the J.D. Pasquetti Engineering Inc. Headquarters Project's (Project) Air Quality and GHG Emissions Technical Report (Report). The District has the following comments on the Project's Report for your consideration.

1. The Project's description does not identify whether any boiler(s) or emergency generator(s) are expected to be installed by the Project. The District would like to inform that any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permits(s) from the District. The applicant, developer, or operator of a project that includes a generator or boiler should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a District permit or a California Air Resources Board portable equipment registration.Comment Noted
2. [District Rule 228, Fugitive Dust \(PDF\)](#), establishes standards to be met by activities generating fugitive dust. Since the area to be disturbed by the Project is greater than one acre, the District recommends that a dust control plan be submitted to and approved by the District prior to breaking ground. The District has developed an online application for this purpose, which can be found on the District website: <https://placerair.org/FormCenter/Air-Pollution-Control-6/Dust-Control-Form-52>.Comment Noted
3. The District was notified that this and another project (J&S Asphalt Headquarters Project) are regarding companies that already "have existing operations within the air district and are relocating/expanding their operations at new sites in the City of Rocklin." Can you please clarify whether this Project is relocating or expanding their operations? If this is a relocation project, you may consider discussing the operations and emissions of the existing site, which could provide a better representation of the net increase in operational emissions.Relocation & expansion so emissions were estimated as all new for informational purposes.
4. The method of land clearing for development is not addressed within the Project Report. The

Mr. Dan Jones

June 4, 2020

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District would like to inform the applicant that burning as a method of vegetation removal/disposal for development is not permitted within the City of Rocklin. Comment Noted

Thank you again for the opportunity to review and comment on the Project's Report. If you have any questions, please feel free to contact me at 530-745-2376 or lmoore@placer.ca.gov.

Sincerely,



Lauren Moore

Air Pollution Control Specialist

Planning and Monitoring Section

Placer County Air Pollution Control District

Cc: Yu-Shuo Chang, Planning and Monitoring Section Manager