



# SAN FRANCISCO PLANNING DEPARTMENT

## CEQA CATEGORICAL EXEMPTION FORM

PROJECT NAME: SFPUC - 398 Quint Substation Project

PROJECT LOCATION: 398 Quint St, Bayview/Hunters Point

CASE NUMBER: 2019-013330ENV

PROJECT TYPE:  New Facility  Replacement Facility/Equipment  
 Repair/Maintenance/Upgrade  Other: \_\_\_\_\_

### 1. EXEMPTION CLASS

- Class 1: Existing Facilities
- Class 2: Replacement or Reconstruction
- Class 3: New Construction or Conversion of Small Structures
- Class 6: Information Collection
- Other: \_\_\_\_\_

### 2. CEQA Impacts

For any box checked below, refer to the attached Environmental Evaluation Application with supporting analysis and documentation.

- Air Quality:** Would the project affect sensitive receptors (specifically schools, colleges, universities, day care facilities, hospitals, residential dwellings, or senior-care facilities)? Would project construction or operations exceed air quality screening criteria using either the SFPUC Air Quality Screening Tool or CalEEMOD?
- Noise:** Would the project conflict with the applicable local Noise Ordinance?
- Hazardous Materials:** Would the project be located on a site included on any list compiled pursuant to Section 65962.5 of the Government Code, or impact an area with known hazardous materials such as a former gas station, auto repair, dry cleaners, heavy manufacturing use, or site with underground storage tanks? If the project site is suspected of containing hazardous materials, would the project involve 50 cubic yards or more of soil disturbance?
- Soils Disturbance/Modification:** Would the project result in soil disturbance greater than 2 feet below grade in an archeological sensitive area or 8 feet in a non-archeological sensitive area?

**Slope/Geological Hazards:** If located on slopes of 20% or greater, in a landslide or liquefaction zone, does the project involve excavation of 50 cubic yards of soil or more, new construction, or square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint?

**Hydrology/Water Quality:** Would the project cause flooding impacts, violate water quality standards, result in on- or off-site erosion impacts, or otherwise substantially degrade water quality?

**Biology:** Would the project have the potential to impact sensitive species, rare plants or designated critical habitat? Is the project consistent with the applicable tree protection ordinance?

**Visual:** Is the project located within or adjacent to a designated scenic roadway, or would the project have the potential to impact scenic resources that are visible from public locations?

**Transportation:** Would project construction or operation have the potential to adversely affect existing traffic patterns, transit operations, pedestrian and/or bicycle safety (hazards), or the adequacy of nearby transit, pedestrian and/or bicycle facilities?

**Historical Resources:** Is the project located on a site with a known or potential historical resource?

Other: \_\_\_\_\_

### 3. CATEGORICAL EXEMPTION DETERMINATION

Further Environmental Review Required.

Notes: \_\_\_\_\_

No Further Environmental Review Required. Project is categorically exempt under CEQA.

Timothy J. Johnston Digitally signed by Timothy J. Johnston  
Date: 2019.10.24 14:14:49 -07'00'

Planner's Signature

10/24/2019

Date

Timothy Johnston, senior environmental planner

Name, Title

Project Approval Action: SFPUC public hearing

Once signed and dated, this document constitutes a categorical exemption pursuant to CEQA Guidelines and Chapter 31 of the Administrative Code.



# PUBLIC PROJECT APPLICATION

The purpose of the Public Project Application is to collect all relevant information necessary for the Planning Department to appropriately conduct environmental review. Unless otherwise specified by your liaison at Environmental Planning, please submit a completed Public Project Application, along with necessary materials to [CPC.EPIntake@sfgov.org](mailto:CPC.EPIntake@sfgov.org).

Once a project is received, you will be contacted regarding payment and/or any additional materials necessary. When payment and/or all missing materials are received; you will receive an email with the ENV case number and contact information for the assigned planner.

Please note that this application is only for projects that do not require an entitlement decision from the San Francisco Planning Commission and/or review of a building permit by Current Planning. For projects requiring an entitlement or review by Current Planning, please complete a regular Project Application and submit according to the submittal instructions outlined in the application.

## PROJECT INFORMATION

### Property Information

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Project Address: **398 Quint Street**

Block/Lot(s): **5227 001**

### Applicant Information

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Public Agency: **SFPUC**

Name: **Scott MacPherson**

Phone Number: **(415) 551-4525**

Email: **smacpherson@sfgwater.org**

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## REQUIRED MATERIALS

- Electronic set of plans (11x17) Please see the Department's Plan Submittal Guidelines for more information.
- Photos of proposed work areas/project site.
- Necessary background reports and supplemental applications (specified in Environmental Evaluation Screening Form)
- MTA only: Synchro data for lane reductions and traffic calming projects.

## PROJECT DESCRIPTION

Please provide a narrative project description that summarizes the project and its purpose. If additional space is necessary, please attach a separate document with a complete project description.

The SFPUC is proposing a substation on the northwestern portion of its 398 Quint parcel, within an approximate 10,500 square foot triangular areas (see attached site plan). To account for future Sea Level Rise, the site elevation will be raised by approximately 3.5 feet. The substation will be bounded on the three sides with a fire-rated concrete perimeter wall, approximately 12' to 20' in height. The electrical equipment will be mounted to concrete pads founded on driven precast concrete piles. The precast concrete piles utilized both for the pile caps and perimeter wall will be 14" square and approximately 120' in length. Two large vaults (12' wide x 30' long x 11' deep and 10' wide x 48' long x 11' deep) will be excavated and installed below the Substation. Streetscape improvements, including sidewalks and landscape plantings, will be included along Davidson Avenue.

## APPROVAL ACTION

In accordance with Chapter 31 of the San Francisco Administrative Code, an appeal of an exemption determination can only be filed within 30 days of the project receiving the first approval action.

<b>Project Approval Action:</b>	SFPUC public hearing
<b>Will the approval action be taken at a noticed public hearing?</b>	<input checked="" type="checkbox"/> YES* <input type="checkbox"/> NO **
* If YES is checked, please see below. **Email CPC.EPIntake@sfgov.org the date of the approval	

## IF APPROVAL ACTION IS TAKEN AT A NOTICED PUBLIC HEARING, INCLUDE THE FOLLOWING CALENDAR LANGUAGE:

### End of Calendar:

CEQA Appeal Rights under Chapter 31 of the San Francisco Administrative Code. If the Commission approves an action identified by an exemption or negative declaration as the Approval Action (as defined in S.F. Administrative Code Chapter 31, as amended, Board of Supervisors Ordinance Number 161-13), then the CEQA decision prepared in support of that Approval Action is thereafter subject to appeal within the time frame specified in S.F. Administrative Code Section 31.16. Typically, an appeal must be filed within 30 calendar days of the Approval Action. For information on filing an appeal under Chapter 31, contact the Clerk of the Board of Supervisors at City Hall, 1 Dr. Carlton B. Goodlett Place, Room 244, San Francisco, CA 94102, or call (415) 554-5184. If the Department's Environmental Review Officer has deemed a project to be exempt from further environmental review, an exemption determination has been prepared and can be obtained on-line at <http://sf-planning.org/index.aspx?page=3447>. Under CEQA, in a later court challenge, a litigant may be limited to raising only those issues previously raised at a hearing on the project or in written correspondence delivered to the Board of Supervisors, Planning Commission, Planning Department or other City board, commission or department at, or prior to, such hearing, or as part of the appeal hearing process on the CEQA decision. Individual calendar items: This proposed action is the Approval Action as defined by S.F. Administrative Code Chapter 31.

### Individual calendar items:

This proposed action is the Approval Action as defined by S.F. Administrative Code Chapter 31.

## ENVIRONMENTAL EVALUATION SCREENING FORM

This form will determine the level of environmental review required. You will be contacted by [CPC.EPIntake@sfgov.org](mailto:CPC.EPIntake@sfgov.org) with a payment request and planner contact information.

If you are submitting an application for entitlement, please submit the Project Application with either Building Permit or Entitlement Intake Appointment.

Environmental Topic	Information	Applicable to Proposed Project?	Notes/Requirements
<b>1a. General</b>	Estimated construction duration (months):	N/A	<u>approximately 9 months</u>
<b>1b. General</b>	Does the project involve replacement or repair of a building foundation? If yes, please provide the foundation design type (e.g., mat foundation, spread footings, drilled piers, etc)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____
<b>2. Transportation</b>	Does the project involve a child care facility or school with 30 or more students, or a location 1,500 square feet or greater?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, submit an Environmental Supplemental- <a href="#">School and Child Care Drop-Off &amp; Pick-Up Management Plan</a> .
<b>3. Shadow</b>	Would the project result in any construction over 40 feet in height?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, an initial review by a shadow expert, including a recommendation as to whether a shadow analysis is needed, may be required, as determined by Planning staff. (If the project already underwent Preliminary Project Assessment, refer to the shadow discussion in the PPA letter.)  An additional fee for a shadow review may be required.
<b>4. Biological Resources</b>	Does the project include the removal or addition of trees on, over, or adjacent to the project site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Number of existing trees on, over, or adjacent to the project site: <u>2</u> Number of existing trees on, over, or adjacent to the project site that would be removed by the project: <u>2</u> Number of trees on, over, or adjacent to the project site that would be added by the project: _____
<b>5a. Historic Preservation</b> 	Would the project involve changes to the front façade or an addition visible from the public right-of-way of a structure built 45 or more years ago or located in a historic district?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, submit a complete <a href="#">Historic Resource Determination</a> Supplemental Application. Include all materials required in the application, including a complete record (with copies) of all building permits.
<b>5b. Historic Preservation</b>	Would the project involve demolition of a structure constructed 45 or more years ago, or a structure located within a historic district?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, a historic resource evaluation (HRE) report will be required. The scope of the HRE will be determined in consultation with <a href="mailto:CPC-HRE@sfgov.org">CPC-HRE@sfgov.org</a> .

 Please see the [Property Information Map](#) or speak with Planning Information Center (PIC) staff to determine if this applies.

Environmental Topic	Information	Applicable to Proposed Project?	Notes/Requirements
<b>6. Archeology</b> 	Would the project result in soil disturbance/modification greater than two (2) feet below grade in an archeologically sensitive area or eight (8) feet below grade in a non-archeologically sensitive area?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, provide depth of excavation/disturbance below grade (in feet*):  <i>*Note this includes foundation work</i>
<b>7. Geology and Soils</b> 	Is the project located within a Landslide Hazard Zone, Liquefaction Zone or on a lot with an average slope of 20% or greater?  ----- Area of excavation/disturbance (in square feet):  _____ Amount of excavation (in cubic yards): <b>2,325</b> _____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	A geotechnical report prepared by a qualified professional must be submitted if one of the following thresholds apply to the project: <ul style="list-style-type: none"> <li>● The project involves:               <ul style="list-style-type: none"> <li>○ excavation of 50 or more cubic yards of soil, or</li> <li>○ building expansion greater than 1,000 square feet outside of the existing building footprint.</li> </ul> </li> <li>● The project involves a lot split located on a slope equal to or greater than 20 percent.</li> </ul> <i>A geotechnical report may also be required for other circumstances as determined by Environmental Planning staff.</i>
<b>8. Air Quality</b> 	Would the project add new sensitive receptors (specifically, schools, day care facilities, hospitals, residential dwellings, and senior-care facilities) within an Air Pollutant Exposure Zone?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the property owner must submit copy of initial filed application with department of public health. More information is found <a href="#">here</a> .
<b>9a. Hazardous Materials</b>	Would the project involve work on a site with an existing or former gas station, parking lot, auto repair, dry cleaners, or heavy manufacturing use, or a site with underground storage tanks?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, submit a Phase I Environmental Site Assessment prepared by a qualified consultant.
<b>9b. Hazardous Materials</b> 	Is the project site located within the Maher area and would it involve ground disturbance of at least 50 cubic yards or a change of use from an industrial use to a residential or institutional use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, submit a copy of the <a href="#">Maher Application Form</a> to the Department of Public Health. Also submit a receipt of Maher enrollment with the Project Application.  For more information about the Maher program and enrollment, refer to the Department of Public Health's <a href="#">Environmental Health Division</a> .  <i>Maher enrollment may also be required for other circumstances as determined by Environmental Planning staff.</i>

 Please see the [Property Information Map](#) or speak with Planning Information Center (PIC) staff to determine if this applies.



October 8, 2019

Mr. Timothy Johnston, MP, Environmental Planner  
 Environmental Planning Division  
 San Francisco Planning Department  
 1650 Mission Street, Fourth Floor  
 San Francisco, CA 94103

RE: 398 Quint Substation Project  
 CEQA Exemption Request  
 Case No. 2019-013330ENV  
 ("CUH87002: Bay Corridor Transmission  
 Distribution (BCTD) in eTime)

Dear Timothy:

The San Francisco Public Utilities Commission (SFPUC) requests review of the proposed Bay Corridor Transmission and Distribution Project (project) under the California Environmental Quality Act (CEQA). The purposes of this letter are to: 1) Provide the Environmental Planning (EP) Division with a detailed description of the project, and 2) Request EP review and concurrence that the proposed project is categorically exempt under CEQA State Guidelines Section 15303, (Class 3 New Construction or Conversion of Small Structures). Class 3 consists of construction and location of limited numbers of new, small facilities or structures, including "water main, sewage, electrical, gas and other utility extensions".

The following description provides relevant background information regarding the purpose and need for the project and presents an analysis of potential environmental effects that demonstrates that the project would not result in adverse environmental effects, and provides support for our recommendation that the activities are categorically exempt under CEQA.

The project would be conducted in compliance with applicable federal, State and local regulations, and under contractual provisions prohibiting work in violation of applicable regulations and plans. Contractors would comply with all applicable SFPUC Standard Construction Measures, issued July 1, 2015, which are on file at EP.

**OUR MISSION:** To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

- London N. Breed**  
Mayor
- Ann Moller Caen**  
President
- Francesca Vietor**  
Vice President
- Anson Moran**  
Commissioner
- Sophie Maxwell**  
Commissioner
- Tim Paulson**  
Commissioner
- Harlan L. Kelly, Jr.**  
General Manager



## **Background**

The SFPUC is San Francisco's municipal power utility. The SFPUC also provides electric services to select local residential and business communities. The SFPUC owns and operates the Hetch Hetchy Power System (HHPS), the main source of SFPUC's power. The HHPS network supplies clean energy to most of San Francisco's municipal facilities, services and customers, which includes San Francisco International Airport; San Francisco General Hospital; MUNI; Police; Fire; retail tenants, residences and businesses in the San Francisco Shipyard; Treasure Island and more. The HHPS is composed of three hydroelectric powerhouses with a combined total hydroelectric output of nearly 400 megawatts (MW). The SFPUC also generates over 10 MW of clean, renewable energy from 19 solar arrays and 2 biogas cogeneration facilities.

To reduce costs and SFPUC's reliance on Pacific Gas and Electric Company (PG&E) for delivery of distribution-level electricity to customers, the SFPUC must increase investment in local distribution assets.

## **Project Description**

The project would be located at the 398 Quint Street parcel, which is bisected by existing railroad tracks. The substation would be constructed on the northwestern portion of the property within an approximate 10,500 square foot triangular area bordered on the north by Davidson Avenue and to the southeast by the existing railroad tracks (see attached site plan). Project components include incoming underground high voltage (HV) power conductors, outgoing underground medium voltage (MV) power conductors, electrical power protection equipment, power transformers, HV and MV switchgear, control systems, MV distribution equipment, and associated equipment required for power system operation.

The SFPUC Substation would receive power at 230 Kilovolts (kV) from Pacific Gas and Electric Company (PG&E) Potrero Substation (Potrero) via a transmission line consisting of three, insulated single-conductor copper cables routed through underground duct banks. The substation would include two 62.5 megavolt-ampere (MVA) transformers, to convert incoming power at 230kV to power at 12.47kV for distribution to customers. Gas Insulated Switchgear (GIS) would serve as the protection for and the electrical disconnect between the incoming HV 230kV transmission line and the HV transformer. 12.47 kV metal-

clad switchgear would be installed to facilitate the power supply to planned customers in the north utilizing insulated copper cables routed through underground duct banks.

The substation would be bounded on the three sides with a fire-rated concrete or metal perimeter wall, approximately 12 to 20 feet in height. The perimeter wall would be supported by driven precast concrete piles. The electrical equipment would be mounted to concrete pads founded on impact-driven precast concrete piles. The precast concrete piles utilized both for the pile caps and perimeter wall would be 14 inches square and approximately 120 feet in length. Two large vaults (12-foot wide x 30-foot long x 11-foot deep and 10-foot wide x 48-foot long x 11-foot deep) would be excavated and installed below the Substation to facilitate cable routing into and out of the electrical equipment. To account for future Sea Level Rise, the site elevation would be raised by approximately 3.5 feet. The deepest excavation is anticipated to be approximately 15 feet for the 11-ft deep vault, measured from the finished grade (12.5 feet below the existing grade). Aggregate base would be placed around the electrical equipment to ensure proper drainage of the site. Streetscape improvements, including sidewalks and landscape plantings, would be included along Davidson Avenue. Two street trees would be removed. Additional site improvements such as initial clearing and grubbing of existing conditions, site lighting, fencing, security cameras, grading, and drainage would be included. Most of the construction would be restricted to the 398 Quint Street Site, except a connection to underground power lines under Davidson Avenue, adjacent to the project site.

The substation is expected to be completed in approximately nine months, with work beginning in 2020.

The project would include pre-construction borings to characterize soil conditions, and geoarcheological testing.

Approximately 2,325 cubic yards and 3,750 cubic yards of material would be excavated and imported, respectively. Based on a 16-cubic yard capacity dump truck, approximately 760 one-way truck trips would be required to import and export material as necessary, or approximately four per day.

### Access and Staging

Access would be through Davidson Avenue. Construction equipment and materials would be staged within the site or within the areas of public right-of-way including the sidewalk, parking lane, and roadways near the site.

### Project Equipment

The proposed project would require the following pieces of equipment:

- Crane
- Pile Driver
- Concrete Trucks
- Water Truck
- Excavator
- Backhoe/Front End Loader
- Air Compressor
- Diesel Generator
- Flatbed Truck
- Dump Truck
- Compactor
- Work Crew Passenger Vehicles

The work crew would vary between approximately 10 and 13 members per day. Approximately ten passenger vehicles would be used to transport work crew members to and from the project site each day.

### **Setting**

The project is located in the Bayview Hunters Point neighborhood. The project is located within PDR and Industrial uses, including the Southeast Treatment Plant across Evans Ave. to the south. A wastewater pump station (Bruce Flynn Pump Station) is located on the same parcel as the project.

### **Schedule**

Construction would take approximately nine months. This work could be discontinuous and is estimated to occur between January 2020 and December 2022. Construction would typically occur weekdays between 7 a.m. and 5 p.m. but could also extend to 8 p.m. depending on construction restrictions. While not expected, weekend work could also be required.

## **ENVIRONMENTAL INFORMATION**

### **Aesthetics**

The project location is currently enclosed by an approximately ten-foot-high corrugated steel fence. The neighborhood is industrial, and nearby buildings are either utility oriented or warehouses. The project includes a 12 to 20-foot high wall on three sides, of which bushings on the top of the transformers would extend above the wall by an estimated three to five feet. Two trees would be removed on Davidson Street. While the visual character of the site would be modified, the project would be visually similar to other industrial and utility uses in the area (such as the Bruce Flynn Pump Station, on the same parcel). Therefore, adverse effects to aesthetics would not be expected.

### **Air Quality**

The proposed project construction equipment and vehicles would comply with the City's Clean Construction Ordinance (CCO). As the project is in an Air Pollutant Exposure Zone (APEZ), equipment would be required to have Tier 2 or higher engines **and** the most effective Verified Diesel Emission Control strategy (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement) as certified by the California Air Resources Board. This project would use Tier 4 equipment as required in the contract specifications.

The SFPUC has estimated the criteria air pollutants generated during project construction based on the maximum number of pieces of equipment that might be operating at one time, a summary of which is shown in Tables 1 and 2 (See Attachment, "Memorandum Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results" for full results).

### Cumulative Emissions

An analysis was conducted to determine if other Hetch Hetchy Power System projects in the vicinity would result in significant cumulative effects. This work consists of Contract DB-128R2 (installation of electrical lines in Mission Bay) and DB-129 (installation of electrical lines in south Mission Bay and northern Bayview and ground improvements adjacent to and Islais Creek conduit crossing). While the DB-128R2 contract is scheduled to be completed before construction of the proposed project, we have included emissions estimates for

2020 as a conservative assumption. These contracts specify Tier 4 equipment must be used. The analysis is summarized in Tables 3 and 4, below.

**Table 1: Project Emissions 2020**

<b>Pollutant</b>	<b>Project emissions (lbs/day)</b>	<b>May 2011 BAAQMD Thresholds (lbs/day)</b>
PM <sub>10</sub>	0.03	54
PM <sub>2.5</sub>	0.03	82
NO <sub>x</sub>	1.84	54
ROG	0.29	54

Project emissions derived from the *Memorandum Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results*, attached, Table 7. Average Daily Emissions are calculated based on approximately 154 workdays in 2020

**Table 2: Project Emissions 2021**

<b>Pollutant</b>	<b>Project emissions (lbs/day)</b>	<b>May 2011 BAAQMD Thresholds (lbs/day)</b>
PM <sub>10</sub>	0.04	54
PM <sub>2.5</sub>	0.04	82
NO <sub>x</sub>	4.51	54
ROG	0.35	54

Project emissions derived from the *Memorandum Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results*, attached, Table 8. Average Daily Emissions are calculated based on approximately 42 workdays in 2021.

**Table 3: Cumulative Project Emissions 2020**

<b>Pollutant</b>	<b>Project emissions (lbs/day)</b>	<b>May 2011 BAAQMD Thresholds (lbs/day)</b>
PM <sub>10</sub>	0.13	54
PM <sub>2.5</sub>	0.13	82
NO <sub>x</sub>	22.54	54
ROG	1.18	54

Project emissions derived from the *Memorandum Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results*, attached, Table 9. Average Daily Emissions are calculated based on approximately 154 workdays in 2020.

**Table 4: Cumulative Project Emissions 2021**

<b>Pollutant</b>	<b>Project emissions (lbs/day)</b>	<b>May 2011 BAAQMD Thresholds (lbs/day)</b>
PM <sub>10</sub>	0.10	54
PM <sub>2.5</sub>	0.10	82
NO <sub>x</sub>	15.08	54
ROG	0.90	54

Project emissions derived from the *Memorandum Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results*, attached, Table 10. Average Daily Emissions are calculated based on approximately 42 workdays in 2021.

Per SFPUC Standard Construction Measure Number 2, the proposed project construction equipment and vehicles would comply with the City's Clean Construction Ordinance and Construction Dust Control Ordinance. To meet air quality thresholds, the project would (as necessary) implement air quality controls to be tailored to the project, such as restricting the number of crews operating at the same time, Verified Diesel Emissions Control Strategies (VDECS) such as diesel particulate filters, customized construction schedules and procedures, and low emissions fuel.

Given the project would comply with construction dust and criteria emissions standards, adverse effects on air quality would not be expected.

### **Biological Resources**

The project is located on an urban, paved parcel and the only biological resources that would be affected are two street trees, which would be removed. In accordance with SFPUC Standard Construction Measure Number 7, trees to be removed would be surveyed for nesting birds between February 15 and August 31 to ensure active migratory bird nests (containing eggs or chicks), if present, are not destroyed. The project would comply with the Urban Forestry Ordinance (Article 16 of the San Francisco Public Works Code). Therefore, adverse effects to biological resources would not be expected.

### **Cultural Resources**

Far Western's draft (2019) prehistoric sensitivity model maps the project site as not sensitive for near surface or buried prehistoric resources. Sensitivity for submerged resources is ranked as moderate, since the project site was

inundated by the rising bay between 8,000 and 6,000 years ago, at which time the bay region is believed to have been only very sparsely settled. However, the project site is in the same age-of-submergence band in which two isolate prehistoric lithic flakes were encountered at the SEP. On this basis, there is the potential for the presence of very deeply buried early Holocene sites to be affected by pile construction at the project site. Some geotechnical cores in the vicinity also encountered a deeply buried thick layer of plants, which may be suggestive of a buried terrestrial surface.

Historic mapping suggests that although there was a 19th century tannery operation on a wharf or elevated berm along Evans Street adjacent to the project block, the project block itself was within the Islais Creek Estuary and was not filled until approximately 1915. One geotechnical core in Evans Ave encountered a thick wood layer that likely represents the wooden boardwalk on which the tanneries operated. It is unlikely that this boardwalk extends into the project area. Tannery waste (bone, hair, possibly industrial or residential debris) could be present in the upper layers of the Young Bay sediments that underlie the project site. Project excavations would only marginally penetrate the overlying recent fill and are unlikely to expose this material, but it could be encountered by pile drilling. While its information potential is likely limited, sampling for characterization would be appropriate. Post fill development of the project site appears to have been confined to use as a lumber yard. This included a waste burning facility (Sanborn 1950: 808); resultant material may be present in the fill on the project site. This material is unlikely to have significant information potential, as it would be expected to consist primarily of wood ash and other material routinely associated with modern lumber operations.

The potential of the project to adversely affect archeological resources may be avoided by implementation of SFPUC Standard Archeological Measure I (Discovery during Construction, and SFPUC Standard Archeological Measure III (Archeological Testing), which would consist of geoarchaeological testing prior to construction.

The project therefore would not result in adverse effects to archeological and historic resources.

## **Hazardous Materials**

BEM staff reviewed the State Water Resources Control Board (SWRQB) GeoTracker and Department of Toxic Substances Control (DTSC) Envirostor databases. The closest site is a closed LUST cleanup location at Circosta Iron & Metal at 1801 Evans Avenue. During construction, the project would follow the requirements of the Maher Ordinance (Article 22A of the San Francisco Health Code). Therefore, adverse effects related to hazardous materials are not expected to occur.

## **Noise**

### Operational Noise

Each transformer (only one of which would be used at a time) could generate up to 81 dBA at six feet. The nearest sensitive receptor is a residential complex located at 3900 Third Street, approximately 1,100 feet away. At that distance, noise would be approximately 36 dBA<sup>1</sup>, which is far below ambient nighttime noise levels in the area<sup>2</sup>. This is a very conservative calculation, as the actual noise would be expected to be significantly lower due to intervening structures and the project wall.

### Construction Noise

During construction, the project would follow the requirements of the San Francisco noise ordinance (Article 29 of the San Francisco Police Code).

Therefore, adverse effects related to noise are not expected to occur.

## **Transportation**

Construction would require the temporary closure of the south lane of Davidson Avenue, and the temporary occupancy of on-street parking spaces. Construction staging and delivery vehicles may temporarily impede traffic flow on Davidson Avenue and surrounding streets. If necessary, through traffic may be temporarily detoured around the construction site to avoid conflicts with

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<sup>1</sup> Calculated by using the inverse square law.

<sup>2</sup> The Biosolids Digester Facilities Project Final EIR measured ambient nighttime noise levels (Leq) between 55 and 64 dBA. *Biosolids Digester Facilities Project Final EIR*, page 4.7-10 (Case No. 2015-000644ENV).

construction equipment. During the construction period, temporary and intermittent traffic and transit delays may result from truck movements to and from the construction site. In general, parking lane, travel lane, and sidewalk closures are subject to review and approval by the City's Transportation Advisory Staff Committee (TASC) which consists of representatives from City departments including the SFMTA, Public Works, Fire, Police, Public Health, the Port, and the Taxi Commission. The TASC review and approval process takes into consideration other construction projects in the vicinity (such as other SFPUC utility projects); pedestrian, transit and traffic operations; and specific land uses. If detours are necessary, street signs and flaggers would clearly identify the detours around the construction site. Open trenches would be covered with steel plates at the intersections and along transit routes outside of construction hours.

Traffic generated by construction vehicles for the proposed project would be approximately 25 truck trips per day, or three truck trips per hour.

### **Growth Inducement**

While the proposed project would transmit power, it would not generate power. Power would be generated from the existing Hetch Hetchy Power System (HHPS), which would be transmitted to the project through the PG&E Potrero Substation. If this project is not implemented, PG&E would continue to distribute power through its own system, and the amount of power generated by the existing HHPS would not change. As PG&E is required to distribute power to customers within its service area, new customers (whose projects would require separate CEQA review) would continue to be served with or without the proposed project.

As the project would not foster economic or population growth, result in the construction of additional housing, or remove obstacles to population growth, adverse effects related to growth inducement would not be anticipated.

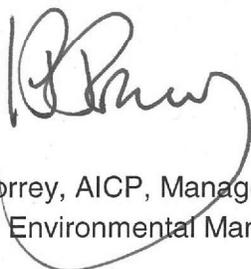
### **CEQA Compliance/Recommendation**

The SFPUC recommends that EP determine the proposed 398 Quint Street Substation Project is exempt under CEQA Guidelines 15303, (Class 3 New Construction or Conversion of Small Structures).

Mr. Timothy Johnston, MP, Environmental Planner  
Environmental Planning Division, San Francisco Planning Department  
398 Quint Street Substation Project Exemption Request  
October 8, 2019  
Page 11

Should you have questions regarding the proposed Project, Environmental Project Manager Scott MacPherson can be reached at (415) 551-4525.

Sincerely,

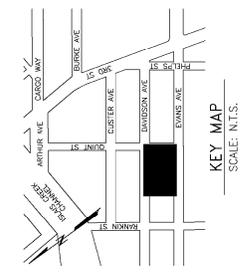
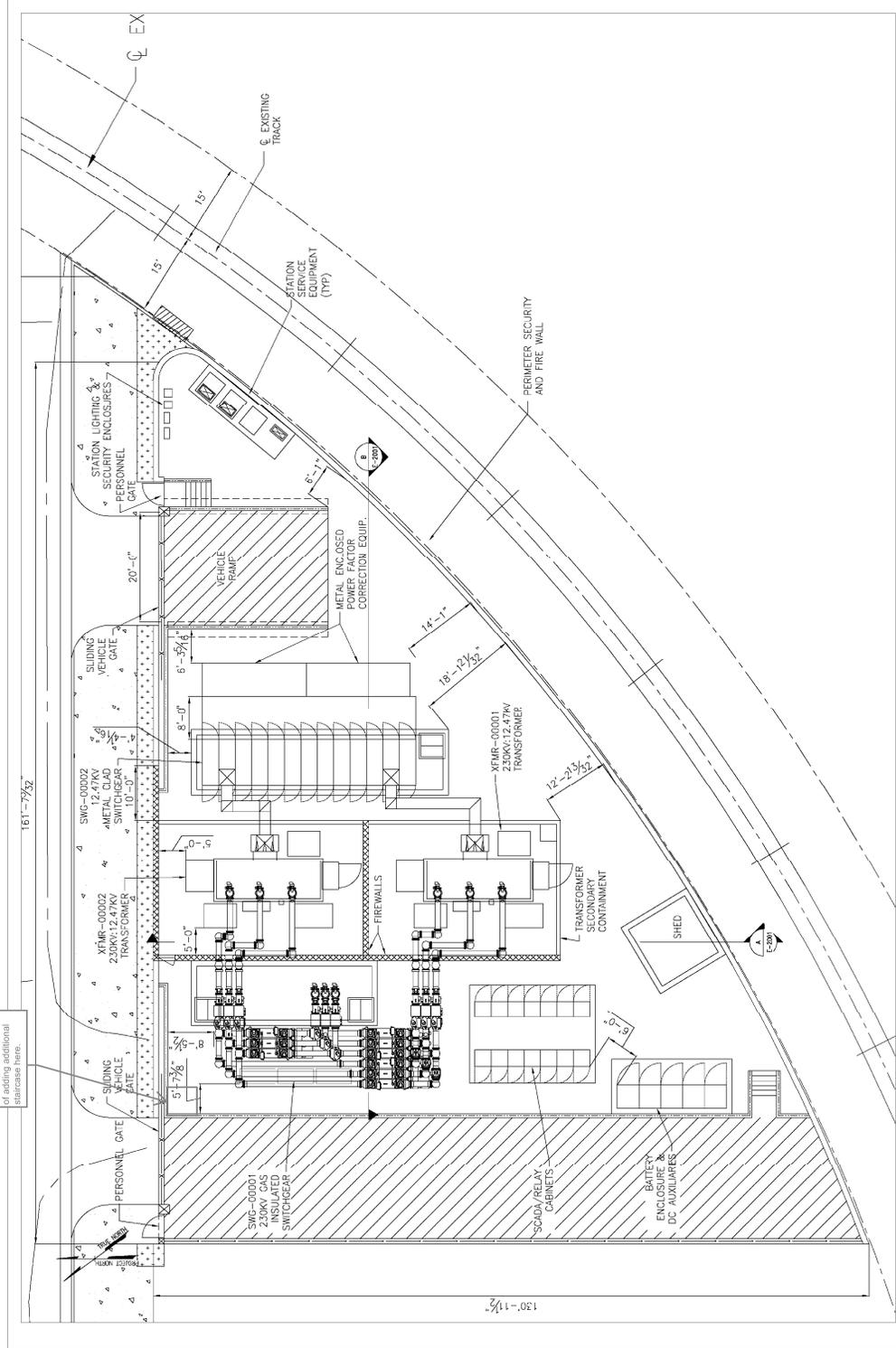
A handwritten signature in black ink, appearing to read 'Irina P. Torrey', is written over a circular stamp or seal.

Irina P. Torrey, AICP, Manager  
Bureau of Environmental Management

Attachments:

Site plan  
Bay Corridor Transmission and Distribution Project Alignment Emissions

cc: Scott MacPherson, Environmental Project Manager, SFPUC Bureau of  
Environmental Management  
David Myerson, Project Manager, SFPUC



LOCATION MAP  
SCALE: 1" = 10'

35% SUBMITTAL

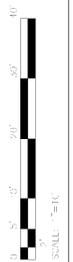
NOT FOR CONSTRUCTION  
CONTRACT NO. DB-130

CITY AND COUNTY OF SAN FRANCISCO  
PUBLIC UTILITIES COMMISSION  
INFRASTRUCTURE DIVISION  
ENGINEERING MANAGEMENT BUREAU  
BAY CORRIDOR TRANSMISSION AND DISTRIBUTION  
PHASE 3 (EIS)

PROJECT NO.	DB-130
DATE	08/09/2013
SCALE	AS SHOWN
DESIGNED BY	AS SHOWN
CHECKED BY	AS SHOWN
DATE	08/09/2013
PROJECT TITLE	BAY CORRIDOR TRANSMISSION AND DISTRIBUTION PHASE 3 (EIS)
PROJECT LOCATION	GENERAL ARRANGEMENT
PROJECT NUMBER	E-1001
REVISIONS	0



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FOR REDUCED PLANS ORIGINAL SCALE 6 IN INCHES

DATE PLOTTED: 08/09/2013 10:52:15 AM

**Project name:**  
Bay Corridor Transmission and  
Distribution Project

**To:**  
Scott MacPherson  
San Francisco Public Utilities Commission

**From:**  
Paola Peña  
Amir Fanai  
David Fyfe  
AECOM

**Cc:**  
Jack Lin  
David Myerson  
San Francisco Public Utilities Commission

**Date:**  
October 2, 2019

## Memorandum – DRAFT –

**Subject:** Bay Corridor Transmission and Distribution Project Air Quality Analysis and Results

AECOM has prepared this air quality technical memorandum (memo) for the remaining work that is to be constructed under the Bay Corridor Transmission and Distribution (BCTD) Phase 1 and Phase 2 Projects (project). The purpose of this memo is to demonstrate that the project would not result in adverse environmental effects to air quality and provide support that the activities are categorically exempt under the California Environmental Quality Act (CEQA). The remaining contracts include BCTD DB128R2, DB129.1 DB129.2, and DB130. The following sections present the methodology and results for the different contracts in comparison to Bay Area Air Quality Management District (BAAQMD) thresholds.

### Project Description

The SFPUC is proposing underground electrical power improvements required to deliver power to customers along the eastern San Francisco waterfront. The project is located in the Mission Bay and Bayview Hunters Point neighborhoods, from Mission Rock Street to the north, to Evans Avenue to the south. The project alignment runs along or near the eastern waterfront of the City, through a mix of industrial, residential, and commercial uses.

### Air Quality Background

The project is located within the City and County of San Francisco, under the jurisdiction of the BAAQMD. The BAAQMD monitors air quality within Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of Solano and Sonoma Counties in the San Francisco Bay Area Air Basin (SFBAAB). Local climatological effects, including wind speed and direction, temperature, inversion layers, and precipitation and fog, can exacerbate air quality problems in the SFBAAB. The climate of the SFBAAB is characterized by warm, dry summers and mild winters.

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide (NO<sub>2</sub>); sulfur dioxide (SO<sub>2</sub>); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter (PM<sub>10</sub>) and PM equal to or less than 2.5 micrometers in diameter (PM<sub>2.5</sub>). Because the air quality standards for these air pollutants are regulated using human and environment health-based criteria, they are commonly referred to as “criteria air pollutants.”

### Thresholds and Methodology

To provide guidance for the analysis, the BAAQMD CEQA Air Quality Guidelines were consulted and used to inform environmental review. The BAAQMD CEQA Air Quality Guidelines are for informational purposes and should be followed by local governments at their own discretion (BAAQMD 2017). The CEQA Air Quality Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the BAAQMD to any specific course of regulatory action. The BAAQMD Air Quality CEQA Thresholds of Significance are presented in Table 1.

Criteria air pollutants emissions were estimated for construction of the project using the methodology and assumptions discussed below. Because ozone is not directly emitted, but instead formed through the photochemical processes involving precursor chemicals [i.e. nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG)] in the presence of sunlight, the precursor pollutants are those that are analyzed. Construction of the project would result in the temporary generation of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions associated primarily from off-road construction equipment, on-road motor vehicles, soil excavation and material transport. ROG and NO<sub>x</sub> emissions are primarily associated with mobile equipment exhaust. Fugitive dust emissions are primarily associated with site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on- and off-site.

**Table 1. BAAQMD Construction-Related Thresholds of Significance**

Emissions Sources	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust	PM <sub>10</sub> /PM <sub>2.5</sub> Fugitive Dust
Thresholds of Significance (lbs/day) <sup>(a)</sup>	54	54	82	54	BMPs
Notes: (a) Thresholds of significance are in average daily emissions. ROG = reactive organic gases; NOX = oxides of nitrogen; PM10 = particulate matter with aerodynamic diameter less than 10 microns; PM2.5 = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day; BMPs = Best Management Practices  Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)					

### Construction

Construction-related emissions associated with typical construction activities were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod allows the user to enter project-specific construction information, such as construction schedule, types, number, and horsepower of construction equipment, and number and length of off-site motor vehicle trips. Total annual construction emissions were calculated and converted from tons to average pounds per day (lbs/day), using the estimated construction durations. Construction emissions were analyzed for each of the contracts as detailed in the following sections.

In addition, as detailed in the CEQA Exemption Request for the BCTD Project, the alignment consists of both areas outside and within an Air Pollution Exposure Zone (APEZ). The City’s Clean Construction Ordinance (CCO) requires construction in an APEZ to (1) use Tier 2 or higher engines and the most effective Verified Diesel Emission Control Strategies (VDECS) available for the engine type (Tier 4 engines automatically meet this requirement); (2) prepare a Construction Emissions Minimization Plan; and (3) monitor and document compliance. In the rest of the project alignment, the COO requires off-road equipment use biodiesel fuel grade B20 and utilize off-road equipment that either: (1) meets or exceeds Tier 2 standards for off-road engines; or (2) operates with the most effective VDECS. As this project could be constructed in segments potentially months apart, and the alignment consists of both areas outside and within an APEZ, emissions have been estimated assuming three scenarios (Tier 2 engines with B20 fuel, Tier 2 engines and Level 3 VDECS, and Tier 4 engines) for each of the three contracts. Additional assumptions and modeling outputs are provided in Attachment A.

### DB-128R2

Under this contract, project construction is anticipated to continue over the next 9 months, with construction completion anticipated in June 2020. Length of trenching under this contract is anticipated to be on the order of approximately 7,255 linear feet. This contract would require the use of an excavator, jackhammer, saw cutter, dump truck, electrical generator, skid loader, concrete trucks, asphalt truck, and compact roller. The analysis assumed the construction crew would consist of approximately 15 workers. The analysis also assumed approximately 9,711 and 7,335 cubic yards (CY) of soil would be excavated and imported, respectively, during trenching. Based on a 16-CY capacity dump truck, the analysis assumed approximate 2,133 one-way truck trips would be required to import and export material as necessary.

### DB-129

Under this contract, project construction is anticipated to occur over 8 months, with construction to commence in June 2020. Length of trenching under the DB-129.1 and DB-129.2 contracts is anticipated to be on the order of approximately 7,529 linear feet. The DB-129 work would require the use of an excavator, jackhammer, saw cutter, dump truck, frontend loader/backhoe, electric generator, skid loader, concrete trucks, asphalt truck, and compact roller. The analysis assumed the construction crew would consist of approximately 15 workers. The analysis also assumed approximately 40,530 and 32,315 CY of soil would be excavated and imported, respectively, during trenching under the DB-129.1 and DB-129.2 contracts. Based on a 16-CY capacity dump truck, the analysis assumed approximate 9,106 one-way truck trips would be required to import and export material as necessary. Additionally, it was assumed approximately 2,410 CY of concrete would be required during construction.

### Islais Creek Bore Ground Improvements

The Islais Creek Bore ground improvements will be constructed under the DB-129.2 contract. Project construction is anticipated to occur over 4 months, with construction to commence in 2020 and coincide with the DB-129 work. This contract would require the use of an auger drilling rig, track crane, excavator, loader/backhoe, dump truck, compactor, generator, air compressor, and water tank. The analysis assumed the construction crew would consist of approximately 9 workers.

### DB-130

The BCTD Electrical Substation will be constructed under the DB-130 contract. Project construction is anticipated to occur over 9 months, with construction to commence in June 2020. This contract would require the use of a crane, excavator, loader/backhoe, dump truck, concrete truck, compactor, generator, air compressor, and water truck. The analysis assumed the construction crew would consist of approximately 10 to 13 workers. The analysis also assumed approximately 2,325 CY and 3,750 CY of material would be excavated and imported, respectively. Based on a 16-CY capacity dump truck, the analysis assumed approximately 760 one-way truck trips would be required to import and export material as necessary. Additionally, it was assumed approximately 1,455 CY of concrete would be required during construction.

## **Results**

Tables 2 through 8 show the average daily construction emissions for the contracts for each of the scenarios, in comparison to the BAAQMD thresholds of significance.

**Table 2. DB-128R2 Average Daily Construction Emissions**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	1.38	40.23	0.99	0.99
Tier 2 engines, Level 3 VDECS	1.69	39.53	0.18	0.18
Tier 4 Engines	0.75	8.05	0.09	0.09
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 218 workdays. See Attachment A for more details.

ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day

Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 3. DB-129.1 and DB-129.2 Average Daily Construction Emissions (2020)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	1.06	34.41	0.52	0.52
Tier 2 engines, Level 3 VDECS	1.21	34.10	0.13	0.13
Tier 4 Engines	0.75	20.05	0.09	0.08
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 154 workdays. See Attachment A for more details.

ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day

Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 4. DB-129.1 and DB-129.2 Average Daily Construction Emissions (2021)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	1.04	33.05	0.51	0.51
Tier 2 engines, Level 3 VDECS	1.18	32.74	0.13	0.13
Tier 4 Engines	0.72	18.68	0.08	0.08
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 22 workdays. See Attachment A for more details.

ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day

Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 5. DB-129.2 (Islais Creek Ground Improvements) Average Daily Construction Emissions (2020)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	0.59	20.60	0.46	0.46
Tier 2 engines, Level 3 VDECS	0.73	20.21	0.08	0.08
Tier 4 Engines	0.35	1.52	0.04	0.04
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 66 workdays. See Attachment A for more details.

ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day

Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 6. DB-129.2 (Islais Creek Ground Improvements) Average Daily Construction Emissions (2021)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	0.58	20.58	0.46	0.46
Tier 2 engines, Level 3 VDECS	0.72	20.18	0.08	0.08
Tier 4 Engines	0.34	1.49	0.04	0.04
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 22 workdays. See Attachment A for more details.  
 ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day  
 Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 7. DB-130 Average Daily Construction Emissions (2020)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	0.51	14.85	0.37	0.37
Tier 2 engines, Level 3 VDECS	0.61	14.58	0.07	0.07
Tier 4 Engines	0.29	1.84	0.03	0.03
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 154 workdays. See Attachment A for more details.  
 ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day  
 Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 8. DB-130 Average Daily Construction Emissions (2021)**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	0.57	17.77	0.39	0.39
Tier 2 engines, Level 3 VDECS	0.69	17.49	0.08	0.07
Tier 4 Engines	0.35	4.51	0.04	0.04
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 42 workdays. See Attachment A for more details.  
 ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day  
 Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

Table 9 and 10 below show the average daily emissions associated with the potential overlap in construction activities between the DB-129.1, DB-129.2, and DB-130 contracts.

**Table 9. 2020 Average Daily Construction Emissions**

Scenario	ROG	NO <sub>x</sub>	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust
Tier 2 Engines, B20 fuel	1.82	58.09	1.08	1.08
Tier 2 engines, Level 3 VDECS	2.13	57.34	0.23	0.23
Tier 4 Engines	1.18	22.54	0.13	0.13
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 154 workdays in 2020. See Attachment A for more details.  
 ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day  
 Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Table 10. 2021 Average Daily Construction Emissions**

<b>Scenario</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub> Exhaust</b>	<b>PM<sub>2.5</sub> Exhaust</b>
Tier 2 Engines, B20 fuel	1.42	45.86	0.90	0.90
Tier 2 engines, Level 3 VDECS	1.68	45.21	0.18	0.18
Tier 4 Engines	0.90	15.08	0.10	0.10
Thresholds of Significance (lbs/day) <sup>1</sup>	54	54	82	54

Notes:  
<sup>1</sup> Average Daily Emissions are calculated based on approximately 42 workdays in 2021. See Attachment A for more details.  
 ROG = reactive organic gases; NOX = oxides of nitrogen; PM10 = particulate matter with aerodynamic diameter less than 10 microns;  
 PM2.5 = particulate matter with aerodynamic diameter less than 2.5 microns; lbs/day = pounds per day  
 Source: Thresholds from Table 2-1 of the BAAQMD CEQA Air Quality Guidelines (BAAQMD 2017)

**Conclusion**

As shown in Tables 2 through 8, average daily emissions during construction of each of the individual contracts would not exceed the recommended BAAQMD thresholds of significance. However, as shown in Table 9, average daily emissions from the potential overlap between construction activities of the DB-129.1, DB-129.2, and DB-130 would exceed the threshold of significance for NO<sub>x</sub> in 2020 under the scenarios with Tier 2 engines with B20 fuel and Tier 2 engines with Level 3 VDECS. As such, the specifications for the contracts will require the use of Tier 4 equipment.

## Attachment A: CalEEMod Outputs

DRAFT

## **DB-129 CalEEMod Runs**

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

**BCTD DB129.1 and DB129.2  
San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.32	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project specific acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Equipment entered in one phase.

Off-road Equipment - Project specific construction equipment. Asphalt truck modeled as off-highway truck.

Trips and VMT - Assumes approx. 15 workers per day. Vendor trips account for concrete trucks placing approx. 3,360 CY total, using 8-CY capacity trucks. Haul truck trips based on 16-CY capacity trucks.

Grading - Default acres graded. Approx. 40,530 CY material export and 32,315 material import.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 2 B20 engines. Generator assumed to be electric.

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	4.00	176.00
tblGrading	AcresOfGrading	0.00	1.50

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

tblGrading	MaterialExported	0.00	40,530.00
tblGrading	MaterialImported	0.00	32,315.00
tblLandUse	LotAcreage	0.00	1.32
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	9,359.00	9,106.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00

**2.0 Emissions Summary**

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1372	2.3806	1.4365	5.2500e-003	0.1058	0.0544	0.1602	0.0273	0.0511	0.0784	0.0000	524.4976	524.4976	0.1029	0.0000	527.0706
2021	0.0179	0.3091	0.2048	7.4000e-004	0.0743	6.6700e-003	0.0810	0.0175	6.2700e-003	0.0237	0.0000	73.9217	73.9217	0.0147	0.0000	74.2898
<b>Maximum</b>	<b>0.1372</b>	<b>2.3806</b>	<b>1.4365</b>	<b>5.2500e-003</b>	<b>0.1058</b>	<b>0.0544</b>	<b>0.1602</b>	<b>0.0273</b>	<b>0.0511</b>	<b>0.0784</b>	<b>0.0000</b>	<b>524.4976</b>	<b>524.4976</b>	<b>0.1029</b>	<b>0.0000</b>	<b>527.0706</b>

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0818	2.6494	1.3381	5.2500e-003	0.0995	0.0400	0.1395	0.0263	0.0398	0.0661	24.1931	478.5438	502.7369	0.1017	0.0000	505.2793
2021	0.0114	0.3635	0.1920	7.4000e-004	0.0680	5.6500e-003	0.0736	0.0165	5.6200e-003	0.0222	3.4563	67.3567	70.8130	0.0146	0.0000	71.1771
<b>Maximum</b>	<b>0.0818</b>	<b>2.6494</b>	<b>1.3381</b>	<b>5.2500e-003</b>	<b>0.0995</b>	<b>0.0400</b>	<b>0.1395</b>	<b>0.0263</b>	<b>0.0398</b>	<b>0.0661</b>	<b>24.1931</b>	<b>478.5438</b>	<b>502.7369</b>	<b>0.1017</b>	<b>0.0000</b>	<b>505.2793</b>

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>39.98</b>	<b>-12.02</b>	<b>6.77</b>	<b>0.00</b>	<b>25.26</b>	<b>11.66</b>	<b>4.23</b>	<b>20.86</b>	<b>13.56</b>	<b>0.00</b>	<b>8.78</b>	<b>4.16</b>	<b>1.17</b>	<b>0.00</b>	<b>4.14</b>

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.0591	1.1502
2	9-1-2020	11-30-2020	1.0598	1.1499
3	12-1-2020	2-28-2021	0.7038	0.7841
		Highest	1.0598	1.1502

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2020	2/1/2021	5	176	
2	Architectural Coating	Architectural Coating	6/5/2020	6/5/2020	5	1	

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**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	2.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Generator Sets	1	4.00	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Off-Highway Trucks	1	2.00	402	0.38
Grading	Other Construction Equipment	2	2.00	172	0.42
Grading	Rollers	1	2.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Skid Steer Loaders	1	4.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	30.00	4.00	9,106.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

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- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

**3.2 Grading - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0973	0.9497	0.9628	1.6300e-003		0.0500	0.0500		0.0469	0.0469	0.0000	142.7261	142.7261	0.0377	0.0000	143.6675
<b>Total</b>	<b>0.0973</b>	<b>0.9497</b>	<b>0.9628</b>	<b>1.6300e-003</b>	<b>0.0115</b>	<b>0.0500</b>	<b>0.0616</b>	<b>1.7100e-003</b>	<b>0.0469</b>	<b>0.0486</b>	<b>0.0000</b>	<b>142.7261</b>	<b>142.7261</b>	<b>0.0377</b>	<b>0.0000</b>	<b>143.6675</b>

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**3.2 Grading - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0418	1.2185	0.8644	1.6300e-003		0.0356	0.0356	0.0356	0.0356	0.0356	24.1931	96.7724	120.9655	0.0364	0.0000	121.8763
<b>Total</b>	<b>0.0418</b>	<b>1.2185</b>	<b>0.8644</b>	<b>1.6300e-003</b>	<b>5.1900e-003</b>	<b>0.0356</b>	<b>0.0408</b>	<b>7.7000e-004</b>	<b>0.0356</b>	<b>0.0364</b>	<b>24.1931</b>	<b>96.7724</b>	<b>120.9655</b>	<b>0.0364</b>	<b>0.0000</b>	<b>121.8763</b>

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**3.2 Grading - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**3.2 Grading - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.1197	0.1363	2.3000e-004		6.1200e-003	6.1200e-003	5.7400e-003	5.7400e-003	5.7400e-003	0.0000	20.3901	20.3901	5.3600e-003	0.0000	20.5239
<b>Total</b>	<b>0.0125</b>	<b>0.1197</b>	<b>0.1363</b>	<b>2.3000e-004</b>	<b>0.0115</b>	<b>6.1200e-003</b>	<b>0.0177</b>	<b>1.7100e-003</b>	<b>5.7400e-003</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>20.3901</b>	<b>20.3901</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>20.5239</b>

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**3.2 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	4.3100e-003	0.1838	0.0601	4.7000e-004	0.0599	5.3000e-004	0.0604	0.0150	5.0000e-004	0.0155	0.0000	49.9394	49.9394	9.1600e-003	0.0000	50.1684
Vendor	1.3000e-004	5.0400e-003	1.5400e-003	1.0000e-005	2.9000e-004	1.0000e-005	3.0000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2025	1.2025	1.6000e-004	0.0000	1.2065
Worker	9.4000e-004	6.0000e-004	6.8800e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3898	2.3898	5.0000e-005	0.0000	2.3910
<b>Total</b>	<b>5.3800e-003</b>	<b>0.1894</b>	<b>0.0685</b>	<b>5.1000e-004</b>	<b>0.0628</b>	<b>5.6000e-004</b>	<b>0.0634</b>	<b>0.0158</b>	<b>5.3000e-004</b>	<b>0.0163</b>	<b>0.0000</b>	<b>53.5316</b>	<b>53.5316</b>	<b>9.3700e-003</b>	<b>0.0000</b>	<b>53.7658</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9700e-003	0.1741	0.1235	2.3000e-004	5.0900e-003	5.0900e-003	5.0900e-003	5.0900e-003	5.0900e-003	5.0900e-003	3.4563	13.8251	17.2814	5.2000e-003	0.0000	17.4113
<b>Total</b>	<b>5.9700e-003</b>	<b>0.1741</b>	<b>0.1235</b>	<b>2.3000e-004</b>	<b>5.1900e-003</b>	<b>5.0900e-003</b>	<b>0.0103</b>	<b>7.7000e-004</b>	<b>5.0900e-003</b>	<b>5.8600e-003</b>	<b>3.4563</b>	<b>13.8251</b>	<b>17.2814</b>	<b>5.2000e-003</b>	<b>0.0000</b>	<b>17.4113</b>





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**3.3 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

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

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

### 4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

### 5.0 Energy Detail

Historical Energy Use: N





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### 5.3 Energy by Land Use - Electricity

#### Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Category	tons/yr																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

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**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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### 7.2 Water by Land Use

#### Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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**BCTD DB129.1 and DB129.2  
San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.32	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project specific acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Equipment entered in one phase.

Off-road Equipment - Project specific construction equipment. Asphalt truck modeled as off-highway truck.

Trips and VMT - Assumes approx. 15 workers per day. Vendor trips account for concrete trucks placing approx. 3,360 CY total, using 8-CY capacity trucks. Haul truck trips based on 16-CY capacity trucks.

Grading - Default acres graded. Approx. 40,530 CY material export and 32,315 CY material import.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 2 engines with Level 3 DPF. Generator assumed to be electric.

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Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	4.00	176.00
tblGrading	AcresOfGrading	0.00	1.50

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tblGrading	MaterialExported	0.00	40,530.00
tblGrading	MaterialImported	0.00	32,315.00
tblLandUse	LotAcreage	0.00	1.32
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	9,359.00	9,106.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00

2.0 Emissions Summary

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**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1372	2.3806	1.4365	5.2500e-003	0.1058	0.0544	0.1602	0.0273	0.0511	0.0784	0.0000	524.4976	524.4976	0.1029	0.0000	527.0706
2021	0.0179	0.3091	0.2048	7.4000e-004	0.0743	6.6700e-003	0.0810	0.0175	6.2700e-003	0.0237	0.0000	73.9217	73.9217	0.0147	0.0000	74.2898
Maximum	0.1372	2.3806	1.4365	5.2500e-003	0.1058	0.0544	0.1602	0.0273	0.0511	0.0784	0.0000	524.4976	524.4976	0.1029	0.0000	527.0706

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0929	2.6256	1.4450	5.2500e-003	0.0995	0.0103	0.1098	0.0263	0.0101	0.0365	0.0000	502.7369	502.7369	0.1017	0.0000	505.2793
2021	0.0130	0.3601	0.2073	7.4000e-004	0.0680	1.4100e-003	0.0694	0.0165	1.3800e-003	0.0179	0.0000	70.8130	70.8130	0.0146	0.0000	71.1771
Maximum	0.0929	2.6256	1.4450	5.2500e-003	0.0995	0.0103	0.1098	0.0263	0.0101	0.0365	0.0000	502.7369	502.7369	0.1017	0.0000	505.2793

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	31.73	-11.00	-0.67	0.00	7.04	80.78	25.72	4.23	79.94	46.77	0.00	4.16	4.16	1.17	0.00	4.14

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.0591	1.1447
2	9-1-2020	11-30-2020	1.0598	1.1445
3	12-1-2020	2-28-2021	0.7038	0.7804
		Highest	1.0598	1.1447

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr										MT/yr							
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005	
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Waste																		
Water																		
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																
Water																
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2020	2/1/2021	5	176	
2	Architectural Coating	Architectural Coating	6/5/2020	6/5/2020	5	1	

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**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	2.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Generator Sets	1	4.00	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Off-Highway Trucks	1	2.00	402	0.38
Grading	Other Construction Equipment	2	2.00	172	0.42
Grading	Rollers	1	2.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Skid Steer Loaders	1	4.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	30.00	4.00	9,106.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

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- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Water Exposed Area

**3.2 Grading - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0973	0.9497	0.9628	1.6300e-003		0.0500	0.0500		0.0469	0.0469	0.0000	142.7261	142.7261	0.0377	0.0000	143.6675
<b>Total</b>	<b>0.0973</b>	<b>0.9497</b>	<b>0.9628</b>	<b>1.6300e-003</b>	<b>0.0115</b>	<b>0.0500</b>	<b>0.0616</b>	<b>1.7100e-003</b>	<b>0.0469</b>	<b>0.0486</b>	<b>0.0000</b>	<b>142.7261</b>	<b>142.7261</b>	<b>0.0377</b>	<b>0.0000</b>	<b>143.6675</b>

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**3.2 Grading - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0530	1.1946	0.9713	1.6300e-003	5.9400e-003	5.9400e-003	5.9400e-003	5.9400e-003	5.9400e-003	5.9400e-003	0.0000	120.9655	120.9655	0.0364	0.0000	121.8763
<b>Total</b>	<b>0.0530</b>	<b>1.1946</b>	<b>0.9713</b>	<b>1.6300e-003</b>	<b>5.1900e-003</b>	<b>5.9400e-003</b>	<b>0.0111</b>	<b>7.7000e-004</b>	<b>5.9400e-003</b>	<b>6.7100e-003</b>	<b>0.0000</b>	<b>120.9655</b>	<b>120.9655</b>	<b>0.0364</b>	<b>0.0000</b>	<b>121.8763</b>

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**3.2 Grading - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**3.2 Grading - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.1197	0.1363	2.3000e-004		6.1200e-003	6.1200e-003	5.7400e-003	5.7400e-003	5.7400e-003	0.0000	20.3901	20.3901	5.3600e-003	0.0000	20.5239
<b>Total</b>	<b>0.0125</b>	<b>0.1197</b>	<b>0.1363</b>	<b>2.3000e-004</b>	<b>0.0115</b>	<b>6.1200e-003</b>	<b>0.0177</b>	<b>1.7100e-003</b>	<b>5.7400e-003</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>20.3901</b>	<b>20.3901</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>20.5239</b>

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

**3.2 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	4.3100e-003	0.1838	0.0601	4.7000e-004	0.0599	5.3000e-004	0.0604	0.0150	5.0000e-004	0.0155	0.0000	49.9394	49.9394	9.1600e-003	0.0000	0.0000	50.1684
Vendor	1.3000e-004	5.0400e-003	1.5400e-003	1.0000e-005	2.9000e-004	1.0000e-005	3.0000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2025	1.2025	1.6000e-004	0.0000	0.0000	1.2065
Worker	9.4000e-004	6.0000e-004	6.8800e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3898	2.3898	5.0000e-005	0.0000	0.0000	2.3910
<b>Total</b>	<b>5.3800e-003</b>	<b>0.1894</b>	<b>0.0685</b>	<b>5.1000e-004</b>	<b>0.0628</b>	<b>5.6000e-004</b>	<b>0.0634</b>	<b>0.0158</b>	<b>5.3000e-004</b>	<b>0.0163</b>	<b>0.0000</b>	<b>53.5316</b>	<b>53.5316</b>	<b>9.3700e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>53.7658</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5700e-003	0.1707	0.1388	2.3000e-004	8.5000e-004	8.5000e-004	8.5000e-004	8.5000e-004	8.5000e-004	8.5000e-004	0.0000	17.2814	17.2814	5.2000e-003	0.0000	0.0000	17.4113
<b>Total</b>	<b>7.5700e-003</b>	<b>0.1707</b>	<b>0.1388</b>	<b>2.3000e-004</b>	<b>5.1900e-003</b>	<b>8.5000e-004</b>	<b>6.0400e-003</b>	<b>7.7000e-004</b>	<b>8.5000e-004</b>	<b>1.6200e-003</b>	<b>0.0000</b>	<b>17.2814</b>	<b>17.2814</b>	<b>5.2000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>17.4113</b>





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**3.3 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00				
Total	0.00	0.00	0.00				

### 4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

### 5.0 Energy Detail

Historical Energy Use: N





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**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	tons/yr																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

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**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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### 7.2 Water by Land Use

#### Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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**BCTD DB129.1 and DB129.2  
San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.32	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project specific acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Equipment entered in one phase.

Off-road Equipment - Project specific construction equipment. Asphalt truck modeled as off-highway truck.

Trips and VMT - Assumes approx. 15 workers per day. Vendor trips account for concrete trucks placing approx. 3,360 CY total, using 8-CY capacity trucks. Haul truck trips based on 16-CY capacity trucks.

Grading - Default acres graded. Approx. 40,530 CY material export and 32,315 CY material import.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 4 final engines. Generator assumed to be electric.

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Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	4.00	176.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	MaterialExported	0.00	40,530.00
tblGrading	MaterialImported	0.00	32,315.00
tblLandUse	LotAcreage	0.00	1.32
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	9,359.00	9,106.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	23.00	30.00

**2.0 Emissions Summary**

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**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1372	2.3806	1.4365	5.2500e-003	0.1058	0.0544	0.1602	0.0273	0.0511	0.0784	0.0000	524.4976	524.4976	0.1029	0.0000	527.0706
2021	0.0179	0.3091	0.2048	7.4000e-004	0.0743	6.6700e-003	0.0810	0.0175	6.2700e-003	0.0237	0.0000	73.9217	73.9217	0.0147	0.0000	74.2898
Maximum	0.1372	2.3806	1.4365	5.2500e-003	0.1058	0.0544	0.1602	0.0273	0.0511	0.0784	0.0000	524.4976	524.4976	0.1029	0.0000	527.0706

**Mitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0576	1.5437	1.4242	5.2500e-003	0.0995	6.6100e-003	0.1061	0.0263	6.4200e-003	0.0327	0.0000	502.7369	502.7369	0.1017	0.0000	505.2793
2021	7.9100e-003	0.2055	0.2043	7.4000e-004	0.0680	8.8000e-004	0.0689	0.0165	8.5000e-004	0.0174	0.0000	70.8130	70.8130	0.0146	0.0000	71.1771
Maximum	0.0576	1.5437	1.4242	5.2500e-003	0.0995	6.6100e-003	0.1061	0.0263	6.4200e-003	0.0327	0.0000	502.7369	502.7369	0.1017	0.0000	505.2793

Percent Reduction	tons/yr										MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O
57.77	34.97	0.78	0.00	7.04	87.74	27.48	4.23	87.33	50.93	0.00	4.16	4.16	1.17	0.00	4.14

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.0591	0.6680
2	9-1-2020	11-30-2020	1.0598	0.6730
3	12-1-2020	2-28-2021	0.7038	0.4540
		Highest	1.0598	0.6730

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																
Water																
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	6/1/2020	2/1/2021	5	176	
2	Architectural Coating	Architectural Coating	6/5/2020	6/5/2020	5	1	

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**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	1	2.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Generator Sets	1	4.00	84	0.74
Grading	Graders	0	0.00	187	0.41
Grading	Off-Highway Trucks	1	2.00	402	0.38
Grading	Other Construction Equipment	2	2.00	172	0.42
Grading	Rollers	1	2.00	80	0.38
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Skid Steer Loaders	1	4.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	30.00	4.00	9,106.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

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- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

**3.2 Grading - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0973	0.9497	0.9628	1.6300e-003		0.0500	0.0500		0.0469	0.0469	0.0000	142.7261	142.7261	0.0377	0.0000	143.6675
<b>Total</b>	<b>0.0973</b>	<b>0.9497</b>	<b>0.9628</b>	<b>1.6300e-003</b>	<b>0.0115</b>	<b>0.0500</b>	<b>0.0616</b>	<b>1.7100e-003</b>	<b>0.0469</b>	<b>0.0486</b>	<b>0.0000</b>	<b>142.7261</b>	<b>142.7261</b>	<b>0.0377</b>	<b>0.0000</b>	<b>143.6675</b>

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**3.2 Grading - 2020**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust	0.0177	0.1128	0.9505	1.6300e-003	5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0177	0.1128	0.9505	1.6300e-003	2.2200e-003	2.2200e-003	2.2200e-003	2.2200e-003	2.2200e-003	2.2200e-003	0.0000	120.9655	120.9655	0.0364	0.0000	121.8763
<b>Total</b>	<b>0.0177</b>	<b>0.1128</b>	<b>0.9505</b>	<b>1.6300e-003</b>	<b>5.1900e-003</b>	<b>2.2200e-003</b>	<b>7.4100e-003</b>	<b>7.7000e-004</b>	<b>2.2200e-003</b>	<b>2.9900e-003</b>	<b>0.0000</b>	<b>120.9655</b>	<b>120.9655</b>	<b>0.0364</b>	<b>0.0000</b>	<b>121.8763</b>

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**3.2 Grading - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0318	1.3877	0.4104	3.3400e-003	0.0740	4.0800e-003	0.0781	0.0201	3.9000e-003	0.0240	0.0000	355.8977	355.8977	0.0638	0.0000	357.4914
Vendor	1.1300e-003	0.0386	0.0114	8.0000e-005	2.0100e-003	1.7000e-004	2.1800e-003	5.8000e-004	1.6000e-004	7.4000e-004	0.0000	8.5258	8.5258	1.1400e-003	0.0000	8.5542
Worker	7.0200e-003	4.6700e-003	0.0519	1.9000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	17.3480	17.3480	3.8000e-004	0.0000	17.3575
<b>Total</b>	<b>0.0399</b>	<b>1.4310</b>	<b>0.4737</b>	<b>3.6100e-003</b>	<b>0.0943</b>	<b>4.3900e-003</b>	<b>0.0987</b>	<b>0.0256</b>	<b>4.1900e-003</b>	<b>0.0297</b>	<b>0.0000</b>	<b>381.7714</b>	<b>381.7714</b>	<b>0.0653</b>	<b>0.0000</b>	<b>383.4030</b>

**3.2 Grading - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0115	0.0000	0.0115	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0125	0.1197	0.1363	2.3000e-004		6.1200e-003	6.1200e-003	5.7400e-003	5.7400e-003	5.7400e-003	0.0000	20.3901	20.3901	5.3600e-003	0.0000	20.5239
<b>Total</b>	<b>0.0125</b>	<b>0.1197</b>	<b>0.1363</b>	<b>2.3000e-004</b>	<b>0.0115</b>	<b>6.1200e-003</b>	<b>0.0177</b>	<b>1.7100e-003</b>	<b>5.7400e-003</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>20.3901</b>	<b>20.3901</b>	<b>5.3600e-003</b>	<b>0.0000</b>	<b>20.5239</b>

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**3.2 Grading - 2021**

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	4.3100e-003	0.1838	0.0601	4.7000e-004	0.0599	5.3000e-004	0.0604	0.0150	5.0000e-004	0.0155	0.0000	49.9394	49.9394	9.1600e-003	0.0000	0.0000	50.1684
Vendor	1.3000e-004	5.0400e-003	1.5400e-003	1.0000e-005	2.9000e-004	1.0000e-005	3.0000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.2025	1.2025	1.6000e-004	0.0000	0.0000	1.2065
Worker	9.4000e-004	6.0000e-004	6.8800e-003	3.0000e-005	2.6100e-003	2.0000e-005	2.6300e-003	6.9000e-004	2.0000e-005	7.1000e-004	0.0000	2.3898	2.3898	5.0000e-005	0.0000	0.0000	2.3910
<b>Total</b>	<b>5.3800e-003</b>	<b>0.1894</b>	<b>0.0685</b>	<b>5.1000e-004</b>	<b>0.0628</b>	<b>5.6000e-004</b>	<b>0.0634</b>	<b>0.0158</b>	<b>5.3000e-004</b>	<b>0.0163</b>	<b>0.0000</b>	<b>53.5316</b>	<b>53.5316</b>	<b>9.3700e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>53.7658</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					5.1900e-003	0.0000	5.1900e-003	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5200e-003	0.0161	0.1358	2.3000e-004	3.2000e-004	3.2000e-004	3.2000e-004	3.2000e-004	3.2000e-004	3.2000e-004	0.0000	17.2814	17.2814	5.2000e-003	0.0000	0.0000	17.4113
<b>Total</b>	<b>2.5200e-003</b>	<b>0.0161</b>	<b>0.1358</b>	<b>2.3000e-004</b>	<b>5.1900e-003</b>	<b>3.2000e-004</b>	<b>5.5100e-003</b>	<b>7.7000e-004</b>	<b>3.2000e-004</b>	<b>1.0900e-003</b>	<b>0.0000</b>	<b>17.2814</b>	<b>17.2814</b>	<b>5.2000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>17.4113</b>





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**3.3 Architectural Coating - 2020**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00				
Total	0.00	0.00	0.00				

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

5.0 Energy Detail

Historical Energy Use: N





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**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	tons/yr																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

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**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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### 7.2 Water by Land Use

#### Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB129.1 and DB129.2 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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BCTD DB129.1 and DB129.2 - San Francisco County, Annual

### 10.0 Stationary Equipment

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#### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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### 11.0 Vegetation

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## **Islais Creek CalEEMod Runs**

Islais Creek Ground Improvements - San Francisco County, Annual

**Islais Creek Ground Improvements  
San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.27	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Construction only run for ground improvements. Project acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Project specific construction equipment.

Trips and VMT - Based on 9 workers per day and approximately one pick-up truck per day.

Grading - Default acres graded. Material import and export quantities included in DB129.1 and DB129.2 runs.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 2 B20 fuel. Generator assumed to be electric.

Islais Creek Ground Improvements - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblGrading	AcresOfGrading	0.00	1.00

Islais Creek Ground Improvements - San Francisco County, Annual

tblLandUse	LotAcreage	0.00	1.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00

2.0 Emissions Summary

Islais Creek Ground Improvements - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845
2021	0.0152	0.1519	0.1167	3.2000e-004	1.7100e-003	6.4300e-003	8.1400e-003	4.6000e-004	6.0400e-003	6.5000e-003	0.0000	27.8449	27.8449	7.1100e-003	0.0000	28.0227
Maximum	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0194	0.6799	0.4081	9.5000e-004	5.1300e-003	0.0151	0.0202	1.3700e-003	0.0151	0.0165	13.6070	60.7157	74.3227	0.0209	0.0000	74.8454
2021	6.4200e-003	0.2264	0.1357	3.2000e-004	1.7100e-003	5.0200e-003	6.7300e-003	4.6000e-004	5.0200e-003	5.4800e-003	4.5402	20.1960	24.7362	6.9600e-003	0.0000	24.9101
Maximum	0.0194	0.6799	0.4081	9.5000e-004	5.1300e-003	0.0151	0.0202	1.3700e-003	0.0151	0.0165	13.6070	60.7157	74.3227	0.0209	0.0000	74.8454

ROG	NOx	CO	SO2	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	60.44	-36.04	-14.36	0.00	29.73	24.00	0.00	25.30	23.69	0.00	27.43	11.15	2.35	0.00	11.10

Islais Creek Ground Improvements - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2020	12-31-2020	0.5623	0.6966
2	1-1-2021	3-31-2021	0.1737	0.2420
		Highest	0.5623	0.6966

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	10/1/2020	2/1/2021	5	88	
2	Site Preparation	Site Preparation	10/29/2020	10/28/2020	5	0	
3	Architectural Coating	Architectural Coating	8/27/2021	8/26/2021	5	0	

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**Acres of Grading (Site Preparation Phase): 1**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48
Trenching	Air Compressors	1	4.00	78	0.48
Trenching	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Cranes	1	8.00	231	0.29
Trenching	Excavators	1	1.00	158	0.38
Trenching	Generator Sets	1	4.00	84	0.74
Trenching	Off-Highway Trucks	1	2.00	402	0.38
Trenching	Plate Compactors	1	2.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37

**Trips and VMT**

Islais Creek Ground Improvements - San Francisco County, Annual

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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	8	18.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

**3.2 Trenching - 2020**

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Off-Road	0.0480	0.5049	0.3430	8.9000e-004	0.0221	0.0221	0.0221	0.0208	0.0208	0.0208	0.0000	77.3608	77.3608	0.0211	0.0000	77.8881
<b>Total</b>	<b>0.0480</b>	<b>0.5049</b>	<b>0.3430</b>	<b>8.9000e-004</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>77.3608</b>	<b>77.3608</b>	<b>0.0211</b>	<b>0.0000</b>	<b>77.8881</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.2964</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0174	0.6705	0.3923	8.9000e-004		0.0150	0.0150		0.0150	0.0150	13.6070	54.4279	68.0348	0.0206	0.0000	68.5490
<b>Total</b>	<b>0.0174</b>	<b>0.6705</b>	<b>0.3923</b>	<b>8.9000e-004</b>		<b>0.0150</b>	<b>0.0150</b>		<b>0.0150</b>	<b>0.0150</b>	<b>13.6070</b>	<b>54.4279</b>	<b>68.0348</b>	<b>0.0206</b>	<b>0.0000</b>	<b>68.5490</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
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	0.0000
Vendor	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>6.2964</b>

**3.2 Trenching - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.0146	0.1490	0.1119	3.0000e-004		6.4100e-003	6.4100e-003		6.0300e-003	6.0300e-003	0.0000	25.8098	25.8098	7.0000e-003	0.0000	0.0000	25.9849
<b>Total</b>	<b>0.0146</b>	<b>0.1490</b>	<b>0.1119</b>	<b>3.0000e-004</b>		<b>6.4100e-003</b>	<b>6.4100e-003</b>		<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>25.8098</b>	<b>25.8098</b>	<b>7.0000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>25.9849</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
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	0.0000
Vendor	7.0000e-005	2.5200e-003	7.7000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6012	0.6012	8.0000e-005	0.0000	0.0000	0.6032
Worker	5.6000e-004	3.6000e-004	4.1200e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4339	1.4339	3.0000e-005	0.0000	0.0000	1.4346
<b>Total</b>	<b>6.3000e-004</b>	<b>2.8800e-003</b>	<b>4.8900e-003</b>	<b>3.0000e-005</b>	<b>1.7000e-003</b>	<b>2.0000e-005</b>	<b>1.7300e-003</b>	<b>4.6000e-004</b>	<b>2.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>2.0351</b>	<b>2.0351</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0378</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	5.7900e-003	0.2235	0.1308	3.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003	4.5402	18.1609	22.7011	6.8500e-003	0.0000	0.0000	22.8723
<b>Total</b>	<b>5.7900e-003</b>	<b>0.2235</b>	<b>0.1308</b>	<b>3.0000e-004</b>		<b>5.0100e-003</b>	<b>5.0100e-003</b>		<b>5.0100e-003</b>	<b>5.0100e-003</b>	<b>4.5402</b>	<b>18.1609</b>	<b>22.7011</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>22.8723</b>









Islais Creek Ground Improvements - San Francisco County, Annual

**3.4 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Islais Creek Ground Improvements - San Francisco County, Annual

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

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

### 4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

### 5.0 Energy Detail

Historical Energy Use: N





Islais Creek Ground Improvements - San Francisco County, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

Islais Creek Ground Improvements - San Francisco County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Islais Creek Ground Improvements - San Francisco County, Annual

**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Mitigated

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Islais Creek Ground Improvements - San Francisco County, Annual

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

Equipment Type	Number

**11.0 Vegetation**

Islais Creek Ground Improvements - San Francisco County, Annual

**Islais Creek Ground Improvements**  
San Francisco County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.27	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Construction only run for ground improvements. Project acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Project specific construction equipment.

Trips and VMT - Based on 9 workers per day and approximately one pick-up truck per day.

Grading - Default acres graded. Material import and export quantities included in DB129.1 and DB129.2 runs.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 2 engines with Lvl 3 DPF. Generator assumed to be electric.

Islais Creek Ground Improvements - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblGrading	AcresOfGrading	0.00	1.00

Islais Creek Ground Improvements - San Francisco County, Annual

tblLandUse	LotAcreage	0.00	1.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00

2.0 Emissions Summary

Islais Creek Ground Improvements - San Francisco County, Annual

**2.1 Overall Construction  
Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845
2021	0.0152	0.1519	0.1167	3.2000e-004	1.7100e-003	6.4300e-003	8.1400e-003	4.6000e-004	6.0400e-003	6.5000e-003	0.0000	27.8449	27.8449	7.1100e-003	0.0000	28.0227
Maximum	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845

**Mitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0241	0.6668	0.4566	9.5000e-004	5.1300e-003	2.5800e-003	7.7000e-003	1.3700e-003	2.5700e-003	3.9500e-003	0.0000	74.3227	74.3227	0.0209	0.0000	74.8454
2021	7.9600e-003	0.2220	0.1518	3.2000e-004	1.7100e-003	8.5000e-004	2.5600e-003	4.6000e-004	8.5000e-004	1.3100e-003	0.0000	24.7362	24.7362	6.9600e-003	0.0000	24.9101
Maximum	0.0241	0.6668	0.4566	9.5000e-004	5.1300e-003	2.5800e-003	7.7000e-003	1.3700e-003	2.5700e-003	3.9500e-003	0.0000	74.3227	74.3227	0.0209	0.0000	74.8454

ROG	NOx	CO	SO2	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	50.98	-33.41	-27.96	0.00	88.02	71.07	0.00	87.30	81.70	0.00	11.15	11.15	2.35	0.00	11.10

Islais Creek Ground Improvements - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2020	12-31-2020	0.5623	0.6882
2	1-1-2021	3-31-2021	0.1737	0.2390
		Highest	0.5623	0.6882

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	10/1/2020	2/1/2021	5	88	
2	Site Preparation	Site Preparation	10/29/2020	10/28/2020	5	0	
3	Architectural Coating	Architectural Coating	8/27/2021	8/26/2021	5	0	

Islais Creek Ground Improvements - San Francisco County, Annual

**Acres of Grading (Site Preparation Phase): 1**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48
Trenching	Air Compressors	1	4.00	78	0.48
Trenching	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Cranes	1	8.00	231	0.29
Trenching	Excavators	1	1.00	158	0.38
Trenching	Generator Sets	1	4.00	84	0.74
Trenching	Off-Highway Trucks	1	2.00	402	0.38
Trenching	Plate Compactors	1	2.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37

**Trips and VMT**

Islais Creek Ground Improvements - San Francisco County, Annual

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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	8	18.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Water Exposed Area

**3.2 Trenching - 2020**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0480	0.5049	0.3430	8.9000e-004	0.0221	0.0221	0.0221	0.0208	0.0208	0.0208	0.0000	77.3608	77.3608	0.0211	0.0000	77.8881
<b>Total</b>	<b>0.0480</b>	<b>0.5049</b>	<b>0.3430</b>	<b>8.9000e-004</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>77.3608</b>	<b>77.3608</b>	<b>0.0211</b>	<b>0.0000</b>	<b>77.8881</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.2964</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0220	0.6573	0.4408	8.9000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	68.0348	68.0348	0.0206	0.0000	68.5490
<b>Total</b>	<b>0.0220</b>	<b>0.6573</b>	<b>0.4408</b>	<b>8.9000e-004</b>		<b>2.5100e-003</b>	<b>2.5100e-003</b>		<b>2.5100e-003</b>	<b>2.5100e-003</b>	<b>0.0000</b>	<b>68.0348</b>	<b>68.0348</b>	<b>0.0206</b>	<b>0.0000</b>	<b>68.5490</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
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	0.0000
Vendor	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>6.2964</b>

**3.2 Trenching - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.0146	0.1490	0.1119	3.0000e-004	6.4100e-003	6.4100e-003	6.4100e-003	6.0300e-003	6.0300e-003	6.0300e-003	0.0000	25.8098	25.8098	7.0000e-003	0.0000	0.0000	25.9849
<b>Total</b>	<b>0.0146</b>	<b>0.1490</b>	<b>0.1119</b>	<b>3.0000e-004</b>	<b>6.4100e-003</b>	<b>6.4100e-003</b>	<b>6.4100e-003</b>	<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>25.8098</b>	<b>25.8098</b>	<b>7.0000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>25.9849</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.5200e-003	7.7000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6012	0.6012	8.0000e-005	0.0000	0.6032
Worker	5.6000e-004	3.6000e-004	4.1200e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.0000e-005	4.3000e-004	0.0000	1.4339	1.4339	3.0000e-005	0.0000	1.4346
<b>Total</b>	<b>6.3000e-004</b>	<b>2.8800e-003</b>	<b>4.8900e-003</b>	<b>3.0000e-005</b>	<b>1.7000e-003</b>	<b>2.0000e-005</b>	<b>1.7300e-003</b>	<b>4.6000e-004</b>	<b>2.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>2.0351</b>	<b>2.0351</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>2.0378</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	7.3300e-003	0.2191	0.1469	3.0000e-004		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004	0.0000	22.7011	22.7011	6.8500e-003	0.0000	22.8723
<b>Total</b>	<b>7.3300e-003</b>	<b>0.2191</b>	<b>0.1469</b>	<b>3.0000e-004</b>		<b>8.4000e-004</b>	<b>8.4000e-004</b>		<b>8.4000e-004</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>22.7011</b>	<b>22.7011</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>22.8723</b>









Islais Creek Ground Improvements - San Francisco County, Annual

**3.4 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Islais Creek Ground Improvements - San Francisco County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00				
Total	0.00	0.00	0.00				

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	H-S or C-C	H-O or C-C	H-W or C-W	H-S or C-W	H-O or C-NW	H-O or C-C	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	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
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

5.0 Energy Detail

Historical Energy Use: N





Islais Creek Ground Improvements - San Francisco County, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

Islais Creek Ground Improvements - San Francisco County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Islais Creek Ground Improvements - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Islais Creek Ground Improvements - San Francisco County, Annual

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

Equipment Type	Number

**11.0 Vegetation**

Islais Creek Ground Improvements - San Francisco County, Annual

**Islais Creek Ground Improvements**  
San Francisco County, Annual

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.27	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Construction only run for ground improvements. Project acreage based on trenching limits.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Modeled under one phase.

Off-road Equipment - Project specific construction equipment.

Trips and VMT - Based on 9 workers per day and approximately one pick-up truck per day.

Grading - Default acres graded. Material import and export quantities included in DB129.1 and DB129.2 runs.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and use of Tier 4 Final. Generator assumed to be electric.

Islais Creek Ground Improvements - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	NumDays	2.00	0.00
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LotAcreage	0.00	1.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00

Islais Creek Ground Improvements - San Francisco County, Annual

tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00

**2.0 Emissions Summary**

Islais Creek Ground Improvements - San Francisco County, Annual

**2.1 Overall Construction  
Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845
2021	0.0152	0.1519	0.1167	3.2000e-004	1.7100e-003	6.4300e-003	8.1400e-003	4.6000e-004	6.0400e-003	6.5000e-003	0.0000	27.8449	27.8449	7.1100e-003	0.0000	28.0227
Maximum	0.0501	0.5144	0.3588	9.5000e-004	5.1300e-003	0.0222	0.0273	1.3700e-003	0.0209	0.0223	0.0000	83.6487	83.6487	0.0214	0.0000	84.1845

**Mitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0114	0.0501	0.4064	9.5000e-004	5.1300e-003	1.3200e-003	6.4500e-003	1.3200e-003	1.3200e-003	2.6900e-003	0.0000	74.3227	74.3227	0.0209	0.0000	74.8454
2021	3.7600e-003	0.0164	0.1351	3.2000e-004	1.7100e-003	4.3000e-004	2.1400e-003	4.3000e-004	4.3000e-004	8.9000e-004	0.0000	24.7362	24.7362	6.9600e-003	0.0000	24.9101
Maximum	0.0114	0.0501	0.4064	9.5000e-004	5.1300e-003	1.3200e-003	6.4500e-003	1.3200e-003	1.3200e-003	2.6900e-003	0.0000	74.3227	74.3227	0.0209	0.0000	74.8454

ROG	NOx	CO	SO2	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	76.72	90.01	-13.88	0.00	93.89	75.78	0.00	93.50	87.55	0.00	11.15	11.15	2.35	0.00	11.10

Islais Creek Ground Improvements - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2020	12-31-2020	0.5623	0.0616
2	1-1-2021	3-31-2021	0.1737	0.0211
		Highest	0.5623	0.0616

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**2.2 Overall Operational  
Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	10/1/2020	2/1/2021	5	88	
2	Site Preparation	Site Preparation	10/29/2020	10/28/2020	5	0	
3	Architectural Coating	Architectural Coating	8/27/2021	8/26/2021	5	0	

Islais Creek Ground Improvements - San Francisco County, Annual

**Acres of Grading (Site Preparation Phase): 1**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	0	0.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48
Trenching	Air Compressors	1	4.00	78	0.48
Trenching	Bore/Drill Rigs	1	8.00	221	0.50
Trenching	Cranes	1	8.00	231	0.29
Trenching	Excavators	1	1.00	158	0.38
Trenching	Generator Sets	1	4.00	84	0.74
Trenching	Off-Highway Trucks	1	2.00	402	0.38
Trenching	Plate Compactors	1	2.00	8	0.43
Trenching	Tractors/Loaders/Backhoes	1	6.00	97	0.37

**Trips and VMT**

Islais Creek Ground Improvements - San Francisco County, Annual

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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	8	18.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

**3.2 Trenching - 2020**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Off-Road	0.0480	0.5049	0.3430	8.9000e-004	0.0221	0.0221	0.0221	0.0208	0.0208	0.0208	0.0000	77.3608	77.3608	0.0211	0.0000	77.8881
<b>Total</b>	<b>0.0480</b>	<b>0.5049</b>	<b>0.3430</b>	<b>8.9000e-004</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0221</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0208</b>	<b>0.0000</b>	<b>77.3608</b>	<b>77.3608</b>	<b>0.0211</b>	<b>0.0000</b>	<b>77.8881</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>6.2964</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.3900e-003	0.0407	0.3906	8.9000e-004	1.2500e-003	1.2500e-003	1.2500e-003	1.2500e-003	1.2500e-003	1.2500e-003	0.0000	68.0348	68.0348	0.0206	0.0000	68.5490
<b>Total</b>	<b>9.3900e-003</b>	<b>0.0407</b>	<b>0.3906</b>	<b>8.9000e-004</b>	<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>1.2500e-003</b>	<b>0.0000</b>	<b>68.0348</b>	<b>68.0348</b>	<b>0.0206</b>	<b>0.0000</b>	<b>68.5490</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2020**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
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	0.0000
Vendor	2.4000e-004	8.2600e-003	2.4400e-003	2.0000e-005	4.3000e-004	4.0000e-005	4.7000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.8270	1.8270	2.4000e-004	0.0000	0.0000	1.8330
Worker	1.8100e-003	1.2000e-003	0.0134	5.0000e-005	4.6900e-003	4.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003	0.0000	4.4609	4.4609	1.0000e-004	0.0000	0.0000	4.4634
<b>Total</b>	<b>2.0500e-003</b>	<b>9.4600e-003</b>	<b>0.0158</b>	<b>7.0000e-005</b>	<b>5.1200e-003</b>	<b>8.0000e-005</b>	<b>5.2000e-003</b>	<b>1.3700e-003</b>	<b>6.0000e-005</b>	<b>1.4400e-003</b>	<b>0.0000</b>	<b>6.2879</b>	<b>6.2879</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>6.2964</b>

**3.2 Trenching - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.0146	0.1490	0.1119	3.0000e-004	6.4100e-003	6.4100e-003	6.4100e-003	6.0300e-003	6.0300e-003	6.0300e-003	0.0000	25.8098	25.8098	7.0000e-003	0.0000	0.0000	25.9849
<b>Total</b>	<b>0.0146</b>	<b>0.1490</b>	<b>0.1119</b>	<b>3.0000e-004</b>	<b>6.4100e-003</b>	<b>6.4100e-003</b>	<b>6.4100e-003</b>	<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>25.8098</b>	<b>25.8098</b>	<b>7.0000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>25.9849</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**3.2 Trenching - 2021**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.5200e-003	7.7000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6012	0.6012	8.0000e-005	0.0000	0.6032
Worker	5.6000e-004	3.6000e-004	4.1200e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4339	1.4339	3.0000e-005	0.0000	1.4346
<b>Total</b>	<b>6.3000e-004</b>	<b>2.8800e-003</b>	<b>4.8900e-003</b>	<b>3.0000e-005</b>	<b>1.7000e-003</b>	<b>2.0000e-005</b>	<b>1.7300e-003</b>	<b>4.6000e-004</b>	<b>2.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>2.0351</b>	<b>2.0351</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>2.0378</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	3.1300e-003	0.0136	0.1302	3.0000e-004		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	22.7011	22.7011	6.8500e-003	0.0000	22.8723
<b>Total</b>	<b>3.1300e-003</b>	<b>0.0136</b>	<b>0.1302</b>	<b>3.0000e-004</b>		<b>4.2000e-004</b>	<b>4.2000e-004</b>		<b>4.2000e-004</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>22.7011</b>	<b>22.7011</b>	<b>6.8500e-003</b>	<b>0.0000</b>	<b>22.8723</b>









Islais Creek Ground Improvements - San Francisco County, Annual

**3.4 Architectural Coating - 2021**

**Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Islais Creek Ground Improvements - San Francisco County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00				
Total	0.00	0.00	0.00				

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477

5.0 Energy Detail

Historical Energy Use: N



Islais Creek Ground Improvements - San Francisco County, Annual

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

Land Use	Natural Gas Use kBtu/yr	tons/yr										MT/yr						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
User Defined Industrial	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	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>							

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use kWh/yr	MT/yr				
		Total CO2	CH4	N2O	CO2e	
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	tons/yr																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

Islais Creek Ground Improvements - San Francisco County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use  
Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Islais Creek Ground Improvements - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Islais Creek Ground Improvements - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Islais Creek Ground Improvements - San Francisco County, Annual

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## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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## **DB-130 CalEEMod Runs**

BCTD DB-130 - San Francisco County, Annual

**BCTD DB-130**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.31	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

BCTD DB-130 - San Francisco County, Annual

Project Characteristics -

Land Use - Project specific acreage based on 13,400 sq. ft.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment.

Grading - Assumes approximately 2,325 CY of material export and 3,750 CY of material import.

Trips and VMT - Based on 10-13 workers per day per phase and approximately 1,455 CY of concrete placement (modeled as concrete truck trips). Haul truck capacity assumed to be 16 CY.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and Tier 2 with B20 fuel. Assumes generator is electric.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

BCTD DB-130 - San Francisco County, Annual

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	1.00	23.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	PhaseEndDate	10/23/2020	9/15/2020
tblConstructionPhase	PhaseEndDate	6/3/2020	8/14/2020
tblConstructionPhase	PhaseEndDate	6/1/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	3/12/2021	11/9/2020
tblConstructionPhase	PhaseEndDate	7/30/2021	1/1/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	2/2/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	3/1/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	8/15/2020
tblConstructionPhase	PhaseStartDate	6/2/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	10/24/2020	9/16/2020

BCTD DB-130 - San Francisco County, Annual

tblConstructionPhase	PhaseStartDate	3/13/2021	11/10/2020
tblConstructionPhase	PhaseStartDate	6/4/2020	1/2/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	2/3/2021
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	2,325.00
tblGrading	MaterialImported	0.00	3,750.00
tblLandUse	LotAcreage	0.00	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors





BCTD DB-130 - San Francisco County, Annual

tbIOffRoadEquipment	PhaseName	2: Pile Driving	
tbIOffRoadEquipment	PhaseName	3: Concrete Foundations	
tbIOffRoadEquipment	PhaseName	3: Concrete Foundations	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	1.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00

BCTD DB-130 - San Francisco County, Annual

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	26.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	22.00
tblTripsAndVMT	WorkerTripNumber	0.00	26.00
tblTripsAndVMT	WorkerTripNumber	0.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	22.00

2.0 Emissions Summary

BCTD DB-130 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1194	1.1225	0.9322	2.1000e-003	0.0187	0.0534	0.0721	4.9500e-003	0.0513	0.0562	0.0000	185.7258	185.7258	0.0347	0.0000	186.5931
2021	0.0320	0.3352	0.2726	7.3000e-004	8.3400e-003	0.0130	0.0213	2.1900e-003	0.0124	0.0146	0.0000	67.0952	67.0952	0.0126	0.0000	67.4104
<b>Maximum</b>	<b>0.1194</b>	<b>1.1225</b>	<b>0.9322</b>	<b>2.1000e-003</b>	<b>0.0187</b>	<b>0.0534</b>	<b>0.0721</b>	<b>4.9500e-003</b>	<b>0.0513</b>	<b>0.0562</b>	<b>0.0000</b>	<b>185.7258</b>	<b>185.7258</b>	<b>0.0347</b>	<b>0.0000</b>	<b>186.5931</b>

**Mitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0389	1.1438	0.7262	2.1000e-003	0.0184	0.0284	0.0468	4.9000e-003	0.0284	0.0333	22.0360	120.1687	142.2047	0.0322	0.0000	143.0107
2021	0.0120	0.3731	0.2203	7.3000e-004	8.0300e-003	8.2100e-003	0.0163	2.1400e-003	8.2000e-003	0.0103	6.2137	49.0121	55.2258	0.0120	0.0000	55.5259
<b>Maximum</b>	<b>0.0389</b>	<b>1.1438</b>	<b>0.7262</b>	<b>2.1000e-003</b>	<b>0.0184</b>	<b>0.0284</b>	<b>0.0468</b>	<b>4.9000e-003</b>	<b>0.0284</b>	<b>0.0333</b>	<b>22.0360</b>	<b>120.1687</b>	<b>142.2047</b>	<b>0.0322</b>	<b>0.0000</b>	<b>143.0107</b>

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	66.37	-4.06	21.43	0.00	2.37	44.78	32.49	1.40	42.54	38.39	0.00	33.08	21.91	6.47	0.00	21.84

BCTD DB-130 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.5307	0.5262
2	9-1-2020	11-30-2020	0.5267	0.5084
3	12-1-2020	2-28-2021	0.5455	0.5290
4	3-1-2021	5-31-2021	0.0048	0.0042
		Highest	0.5455	0.5290

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																
Water																
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-130 - San Francisco County, Annual

**2.2 Overall Operational**

Mitigated Operational

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

Construction Phase

BCTD DB-130 - San Francisco County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1: Site Excavation	Site Preparation	6/1/2020	7/1/2020	5	23	
2	2: Pile Driving	Grading	7/2/2020	8/14/2020	5	32	
3	6: Backfill and Grading	Grading	1/2/2021	2/2/2021	5	22	
4	3: Concrete Foundations	Building Construction	8/15/2020	9/15/2020	5	22	
5	7: Electrical Equipment/Gate Install	Trenching	2/3/2021	3/1/2021	5	19	
6	4: Concrete Slabs	Building Construction	9/16/2020	11/9/2020	5	39	
7	5: Perimeter Wall	Building Construction	11/10/2020	1/1/2021	5	39	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
6: Backfill and Grading	Concrete/Industrial Saws	0	0.00	81	0.73
4: Concrete Slabs	Cranes	0	0.00	231	0.29
5: Perimeter Wall	Cranes	1	8.00	231	0.29
2: Pile Driving	Concrete/Industrial Saws	0	0.00	81	0.73
3: Concrete Foundations	Cranes	1	8.00	231	0.29
3: Concrete Foundations	Forklifts	0	0.00	89	0.20
1: Site Excavation	Graders	0	0.00	187	0.41
4: Concrete Slabs	Forklifts	0	0.00	89	0.20
5: Perimeter Wall	Forklifts	0	0.00	89	0.20

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Rubber Tired Dozers	0	0.00	247	0.40
2: Pile Driving	Rubber Tired Dozers	0	0.00	247	0.40
3: Concrete Foundations	Tractors/Loaders/Backhoes	1	8.00	97	0.37
4: Concrete Slabs	Tractors/Loaders/Backhoes	1	8.00	97	0.37
2: Pile Driving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
5: Perimeter Wall	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
6: Backfill and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Excavators	1	8.00	158	0.38
1: Site Excavation	Off-Highway Trucks	1	1.00	402	0.38
1: Site Excavation	Plate Compactors	1	2.00	8	0.43
1: Site Excavation	Generator Sets	1	8.00	84	0.74
1: Site Excavation	Air Compressors	1	8.00	78	0.48
2: Pile Driving	Bore/Drill Rigs	1	8.00	221	0.50
2: Pile Driving	Cranes	1	8.00	231	0.29
2: Pile Driving	Generator Sets	1	8.00	84	0.74
2: Pile Driving	Air Compressors	1	8.00	78	0.48
3: Concrete Foundations	Generator Sets	1	8.00	84	0.74
3: Concrete Foundations	Air Compressors	1	8.00	78	0.48
4: Concrete Slabs	Off-Highway Trucks	1	8.00	402	0.38
4: Concrete Slabs	Plate Compactors	1	8.00	8	0.43
4: Concrete Slabs	Generator Sets	1	8.00	84	0.74
4: Concrete Slabs	Air Compressors	1	8.00	78	0.48
5: Perimeter Wall	Plate Compactors	1	8.00	8	0.43
5: Perimeter Wall	Generator Sets	1	8.00	84	0.74
5: Perimeter Wall	Air Compressors	1	8.00	78	0.48
6: Backfill and Grading	Off-Highway Trucks	1	8.00	402	0.38

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Plate Compactors	1	8.00	8	0.43
6: Backfill and Grading	Generator Sets	1	8.00	84	0.74
6: Backfill and Grading	Air Compressors	1	8.00	78	0.48
7: Electrical Equipment/Gate Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
7: Electrical Equipment/Gate Install	Cranes	1	8.00	231	0.29
7: Electrical Equipment/Gate Install	Generator Sets	1	8.00	84	0.74
7: Electrical Equipment/Gate Install	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
4: Concrete Slabs	5	26.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1: Site Excavation	6	26.00	0.00	291.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
2: Pile Driving	4	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
3: Concrete Foundations	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
5: Perimeter Wall	5	24.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
6: Backfill and Grading	5	24.00	0.00	469.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
7: Electrical Equipment/Gate Install	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1276	0.1406	2.4000e-004	7.1900e-003	7.1900e-003	6.9400e-003	6.9400e-003	6.9400e-003	6.9400e-003	0.0000	20.5276	20.5276	3.9200e-003	0.0000	20.6256
<b>Total</b>	<b>0.0146</b>	<b>0.1276</b>	<b>0.1406</b>	<b>2.4000e-004</b>	<b>6.1000e-004</b>	<b>7.1900e-003</b>	<b>7.8000e-003</b>	<b>8.0000e-005</b>	<b>6.9400e-003</b>	<b>7.0200e-003</b>	<b>0.0000</b>	<b>20.5276</b>	<b>20.5276</b>	<b>3.9200e-003</b>	<b>0.0000</b>	<b>20.6256</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8900e-003	0.1388	0.0980	2.4000e-004	4.2700e-003	4.2700e-003	4.2700e-003	4.2700e-003	2.8055	11.2221	14.0277	3.5500e-003	0.0000	0.0000	0.0000	14.1165
<b>Total</b>	<b>4.8900e-003</b>	<b>0.1388</b>	<b>0.0980</b>	<b>2.4000e-004</b>	<b>2.7000e-004</b>	<b>4.2700e-003</b>	<b>4.5400e-003</b>	<b>4.0000e-005</b>	<b>4.2700e-003</b>	<b>4.3100e-003</b>	<b>2.8055</b>	<b>11.2221</b>	<b>14.0277</b>	<b>3.5500e-003</b>	<b>0.0000</b>	<b>14.1165</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0233	0.2342	0.1655	4.1000e-004	0.0107	0.0107	0.0107	0.0103	0.0103	0.0103	0.0000	35.8069	35.8069	7.8300e-003	0.0000	36.0025
<b>Total</b>	<b>0.0233</b>	<b>0.2342</b>	<b>0.1655</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>0.0107</b>	<b>0.0107</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>35.8069</b>	<b>35.8069</b>	<b>7.8300e-003</b>	<b>0.0000</b>	<b>36.0025</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.2632	0.1507	4.1000e-004	5.7900e-003	5.7900e-003	5.7900e-003	5.7900e-003	5.7900e-003	5.7900e-003	5.3527	21.4108	26.7635	7.3200e-003	0.0000	26.9464
<b>Total</b>	<b>6.6600e-003</b>	<b>0.2632</b>	<b>0.1507</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>5.7900e-003</b>	<b>5.7900e-003</b>	<b>0.0000</b>	<b>5.7900e-003</b>	<b>5.7900e-003</b>	<b>5.3527</b>	<b>21.4108</b>	<b>26.7635</b>	<b>7.3200e-003</b>	<b>0.0000</b>	<b>26.9464</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.5000e-004	0.0000	5.5000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1387	0.1340	3.0000e-004	6.6900e-003	6.6900e-003	6.6900e-003	6.4200e-003	6.4200e-003	6.4200e-003	0.0000	26.0672	26.0672	5.7100e-003	0.0000	26.2099
<b>Total</b>	<b>0.0163</b>	<b>0.1387</b>	<b>0.1340</b>	<b>3.0000e-004</b>	<b>5.5000e-004</b>	<b>6.6900e-003</b>	<b>7.2400e-003</b>	<b>8.0000e-005</b>	<b>6.4200e-003</b>	<b>6.5000e-003</b>	<b>0.0000</b>	<b>26.0672</b>	<b>26.0672</b>	<b>5.7100e-003</b>	<b>0.0000</b>	<b>26.2099</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	20.6712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3900e-003	0.1835	0.1154	3.0000e-004	4.8000e-003	4.8000e-003	4.8000e-003	4.8000e-003	4.8000e-003	4.8000e-003	3.9700	15.8800	19.8499	5.3900e-003	0.0000	0.0000	19.9847
<b>Total</b>	<b>5.3900e-003</b>	<b>0.1835</b>	<b>0.1154</b>	<b>3.0000e-004</b>	<b>2.5000e-004</b>	<b>4.8000e-003</b>	<b>5.0500e-003</b>	<b>4.8000e-003</b>	<b>4.8000e-003</b>	<b>4.8400e-003</b>	<b>3.9700</b>	<b>15.8800</b>	<b>19.8499</b>	<b>5.3900e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>19.9847</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	0.0000	20.6712
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	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.5.3: Concrete Foundations - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0152	0.1454	0.1160	2.1000e-004	7.6900e-003	7.6900e-003	7.6900e-003	7.3800e-003	7.3800e-003	7.3800e-003	0.0000	18.5396	18.5396	3.4100e-003	0.0000	18.6250
<b>Total</b>	<b>0.0152</b>	<b>0.1454</b>	<b>0.1160</b>	<b>2.1000e-004</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>0.0000</b>	<b>18.5396</b>	<b>18.5396</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>18.6250</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.5 3: Concrete Foundations - 2020**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	3.8100e-003	0.1239	0.0769	2.1000e-004	3.4800e-003	3.4800e-003	3.4800e-003	3.4800e-003	3.4800e-003	3.4800e-003	2.4645	9.8579	12.3223	3.0600e-003	0.0000	12.3989
<b>Total</b>	<b>3.8100e-003</b>	<b>0.1239</b>	<b>0.0769</b>	<b>2.1000e-004</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>3.4800e-003</b>	<b>2.4645</b>	<b>9.8579</b>	<b>12.3223</b>	<b>3.0600e-003</b>	<b>0.0000</b>	<b>12.3989</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.6.7: Electrical Equipment/Gate Install - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0119	0.1135	0.0983	1.8000e-004	5.7200e-003	5.7200e-003	5.7200e-003	5.4800e-003	5.4800e-003	5.4800e-003	0.0000	16.0122	16.0122	2.8900e-003	0.0000	16.0845
<b>Total</b>	<b>0.0119</b>	<b>0.1135</b>	<b>0.0983</b>	<b>1.8000e-004</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>0.0000</b>	<b>16.0122</b>	<b>16.0122</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>16.0845</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.6 7: Electrical Equipment/Gate Install - 2021**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	3.2900e-003	0.1070	0.0664	1.8000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	2.1285	8.5142	10.6427	2.6200e-003	0.0000	10.7082
<b>Total</b>	<b>3.2900e-003</b>	<b>0.1070</b>	<b>0.0664</b>	<b>1.8000e-004</b>		<b>3.0100e-003</b>	<b>3.0100e-003</b>		<b>3.0100e-003</b>	<b>3.0100e-003</b>	<b>2.1285</b>	<b>8.5142</b>	<b>10.6427</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>10.7082</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0319	0.2809	0.2427	5.3000e-004	0.0140	0.0140	0.0140	0.0134	0.0134	0.0134	0.0000	46.2095	46.2095	0.0102	0.0000	46.4654
<b>Total</b>	<b>0.0319</b>	<b>0.2809</b>	<b>0.2427</b>	<b>5.3000e-004</b>	<b>0.0140</b>	<b>0.0140</b>	<b>0.0140</b>	<b>0.0134</b>	<b>0.0134</b>	<b>0.0134</b>	<b>0.0000</b>	<b>46.2095</b>	<b>46.2095</b>	<b>0.0102</b>	<b>0.0000</b>	<b>46.4654</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	9.5500e-003	0.3253	0.2046	5.3000e-004	8.5100e-003	8.5100e-003	8.5100e-003	8.5100e-003	8.5100e-003	8.5100e-003	7.0376	28.1504	35.1879	9.6100e-003	0.0000	35.4283
<b>Total</b>	<b>9.5500e-003</b>	<b>0.3253</b>	<b>0.2046</b>	<b>5.3000e-004</b>	<b>8.5100e-003</b>	<b>8.5100e-003</b>	<b>8.5100e-003</b>	<b>8.5100e-003</b>	<b>8.5100e-003</b>	<b>8.5100e-003</b>	<b>7.0376</b>	<b>28.1504</b>	<b>35.1879</b>	<b>9.6100e-003</b>	<b>0.0000</b>	<b>35.4283</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0271	0.2560	0.2043	3.8000e-004		0.0135	0.0135		0.0129	0.0129	0.0000	32.6173	32.6173	5.9600e-003	0.0000	32.7662
<b>Total</b>	<b>0.0271</b>	<b>0.2560</b>	<b>0.2043</b>	<b>3.8000e-004</b>		<b>0.0135</b>	<b>0.0135</b>		<b>0.0129</b>	<b>0.0129</b>	<b>0.0000</b>	<b>32.6173</b>	<b>32.6173</b>	<b>5.9600e-003</b>	<b>0.0000</b>	<b>32.7662</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.5800e-003	0.2141	0.1329	3.8000e-004	6.0200e-003	6.0200e-003	6.0200e-003	6.0200e-003	6.0200e-003	6.0200e-003	4.3757	17.5026	21.8783	5.3500e-003	0.0000	22.0122
<b>Total</b>	<b>6.5800e-003</b>	<b>0.2141</b>	<b>0.1329</b>	<b>3.8000e-004</b>	<b>6.0200e-003</b>	<b>6.0200e-003</b>	<b>6.0200e-003</b>	<b>6.0200e-003</b>	<b>6.0200e-003</b>	<b>6.0200e-003</b>	<b>4.3757</b>	<b>17.5026</b>	<b>21.8783</b>	<b>5.3500e-003</b>	<b>0.0000</b>	<b>22.0122</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.4000e-004	6.1000e-003	5.2800e-003	1.0000e-005	3.1000e-004	3.1000e-004	3.1000e-004	2.9000e-004	2.9000e-004	2.9000e-004	0.0000	0.8584	0.8584	1.5000e-004	0.0000	0.8622
<b>Total</b>	<b>6.4000e-004</b>	<b>6.1000e-003</b>	<b>5.2800e-003</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>0.8584</b>	<b>0.8584</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.8622</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

BCTD DB-130 - San Francisco County, Annual

**3.8 5: Perimeter Wall - 2021**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.7000e-004	5.6300e-003	3.5000e-003	1.0000e-005	1.6000e-004	1.6000e-004	1.6000e-004	1.6000e-004	1.6000e-004	1.6000e-004	0.1152	0.4606	0.5758	1.4000e-004	0.0000	0.5793
<b>Total</b>	<b>1.7000e-004</b>	<b>5.6300e-003</b>	<b>3.5000e-003</b>	<b>1.0000e-005</b>	<b>1.6000e-004</b>	<b>1.6000e-004</b>	<b>1.6000e-004</b>	<b>1.6000e-004</b>	<b>1.6000e-004</b>	<b>1.6000e-004</b>	<b>0.1152</b>	<b>0.4606</b>	<b>0.5758</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.5793</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

**4.0 Operational Detail - Mobile**

BCTD DB-130 - San Francisco County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	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
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477





**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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BCTD DB-130 - San Francisco County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-130 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

BCTD DB-130 - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

BCTD DB-130 - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-130 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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BCTD DB-130 - San Francisco County, Annual

### 10.0 Stationary Equipment

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#### Fire Pumps and Emergency Generators

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

#### Boilers

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

#### User Defined Equipment

Equipment Type	Number

### 11.0 Vegetation

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BCTD DB-130 - San Francisco County, Annual

**BCTD DB-130**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.31	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

BCTD DB-130 - San Francisco County, Annual

Project Characteristics -

Land Use - Project specific acreage based on 13,400 sq. ft.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment.

Grading - Assumes approximately 2,325 CY of material export and 3,750 CY of material import.

Trips and VMT - Based on 10-13 workers per day per phase and approximately 1,455 CY of concrete placement (modeled as concrete truck trips). Haul truck capacity assumed to be 16 CY.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and Tier 2, Level 3 DPF. Assumes generator is electric.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

BCTD DB-130 - San Francisco County, Annual

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	1.00	23.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	PhaseEndDate	10/23/2020	9/15/2020
tblConstructionPhase	PhaseEndDate	6/3/2020	8/14/2020
tblConstructionPhase	PhaseEndDate	6/1/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	3/12/2021	11/9/2020
tblConstructionPhase	PhaseEndDate	7/30/2021	1/1/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	2/2/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	3/1/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	8/15/2020
tblConstructionPhase	PhaseStartDate	6/2/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	10/24/2020	9/16/2020

BCTD DB-130 - San Francisco County, Annual

tblConstructionPhase	PhaseStartDate	3/13/2021	11/10/2020
tblConstructionPhase	PhaseStartDate	6/4/2020	1/2/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	2/3/2021
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	2,325.00
tblGrading	MaterialImported	0.00	3,750.00
tblLandUse	LotAcreage	0.00	0.31
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors





BCTD DB-130 - San Francisco County, Annual

tbIOffRoadEquipment	PhaseName	2: Pile Driving	
tbIOffRoadEquipment	PhaseName	3: Concrete Foundations	
tbIOffRoadEquipment	PhaseName	3: Concrete Foundations	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	4: Concrete Slabs	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00

BCTD DB-130 - San Francisco County, Annual

tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	26.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	22.00
tblTripsAndVMT	WorkerTripNumber	0.00	26.00
tblTripsAndVMT	WorkerTripNumber	0.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	22.00

2.0 Emissions Summary

BCTD DB-130 - San Francisco County, Annual

**2.1 Overall Construction**

**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1194	1.1225	0.9322	2.1000e-003	0.0187	0.0534	0.0721	4.9500e-003	0.0513	0.0562	0.0000	185.7258	185.7258	0.0347	0.0000	186.5931
2021	0.0320	0.3352	0.2726	7.3000e-004	8.3400e-003	0.0130	0.0213	2.1900e-003	0.0124	0.0146	0.0000	67.0952	67.0952	0.0126	0.0000	67.4104
<b>Maximum</b>	<b>0.1194</b>	<b>1.1225</b>	<b>0.9322</b>	<b>2.1000e-003</b>	<b>0.0187</b>	<b>0.0534</b>	<b>0.0721</b>	<b>4.9500e-003</b>	<b>0.0513</b>	<b>0.0562</b>	<b>0.0000</b>	<b>185.7258</b>	<b>185.7258</b>	<b>0.0347</b>	<b>0.0000</b>	<b>186.5931</b>

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0473	1.1229	0.8082	2.1000e-003	0.0184	5.0500e-003	0.0234	4.9000e-003	5.0300e-003	9.9300e-003	0.0000	142.2047	142.2047	0.0322	0.0000	143.0107
2021	0.0144	0.3673	0.2432	7.3000e-004	8.0300e-003	1.5800e-003	9.6100e-003	2.1400e-003	1.5600e-003	3.7100e-003	0.0000	55.2258	55.2258	0.0120	0.0000	55.5259
<b>Maximum</b>	<b>0.0473</b>	<b>1.1229</b>	<b>0.8082</b>	<b>2.1000e-003</b>	<b>0.0184</b>	<b>5.0500e-003</b>	<b>0.0234</b>	<b>4.9000e-003</b>	<b>5.0300e-003</b>	<b>9.9300e-003</b>	<b>0.0000</b>	<b>142.2047</b>	<b>142.2047</b>	<b>0.0322</b>	<b>0.0000</b>	<b>143.0107</b>

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>59.24</b>	<b>-2.23</b>	<b>12.73</b>	<b>0.00</b>	<b>2.37</b>	<b>64.62</b>	<b>1.40</b>	<b>89.66</b>	<b>80.75</b>	<b>0.00</b>	<b>21.91</b>	<b>21.91</b>	<b>6.47</b>	<b>0.00</b>	<b>21.84</b>

BCTD DB-130 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.5307	0.5207
2	9-1-2020	11-30-2020	0.5267	0.5029
3	12-1-2020	2-28-2021	0.5455	0.5241
4	3-1-2021	5-31-2021	0.0048	0.0041
		Highest	0.5455	0.5241

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																
Water																
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-130 - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

BCTD DB-130 - San Francisco County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1: Site Excavation	Site Preparation	6/1/2020	7/1/2020	5	23	
2	2: Pile Driving	Grading	7/2/2020	8/14/2020	5	32	
3	6: Backfill and Grading	Grading	1/2/2021	2/2/2021	5	22	
4	3: Concrete Foundations	Building Construction	8/15/2020	9/15/2020	5	22	
5	7: Electrical Equipment/Gate Install	Trenching	2/3/2021	3/1/2021	5	19	
6	4: Concrete Slabs	Building Construction	9/16/2020	11/9/2020	5	39	
7	5: Perimeter Wall	Building Construction	11/10/2020	1/1/2021	5	39	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
6: Backfill and Grading	Concrete/Industrial Saws	0	0.00	81	0.73
4: Concrete Slabs	Cranes	0	0.00	231	0.29
5: Perimeter Wall	Cranes	1	8.00	231	0.29
2: Pile Driving	Concrete/Industrial Saws	0	0.00	81	0.73
3: Concrete Foundations	Cranes	1	8.00	231	0.29
3: Concrete Foundations	Forklifts	0	0.00	89	0.20
1: Site Excavation	Graders	0	0.00	187	0.41
4: Concrete Slabs	Forklifts	0	0.00	89	0.20
5: Perimeter Wall	Forklifts	0	0.00	89	0.20

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Rubber Tired Dozers	0	0.00	247	0.40
2: Pile Driving	Rubber Tired Dozers	0	0.00	247	0.40
3: Concrete Foundations	Tractors/Loaders/Backhoes	1	8.00	97	0.37
4: Concrete Slabs	Tractors/Loaders/Backhoes	1	8.00	97	0.37
2: Pile Driving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
5: Perimeter Wall	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
6: Backfill and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Excavators	1	8.00	158	0.38
1: Site Excavation	Off-Highway Trucks	1	1.00	402	0.38
1: Site Excavation	Plate Compactors	1	2.00	8	0.43
1: Site Excavation	Generator Sets	1	8.00	84	0.74
1: Site Excavation	Air Compressors	1	8.00	78	0.48
2: Pile Driving	Bore/Drill Rigs	1	8.00	221	0.50
2: Pile Driving	Cranes	1	8.00	231	0.29
2: Pile Driving	Generator Sets	1	8.00	84	0.74
2: Pile Driving	Air Compressors	1	8.00	78	0.48
3: Concrete Foundations	Generator Sets	1	8.00	84	0.74
3: Concrete Foundations	Air Compressors	1	8.00	78	0.48
4: Concrete Slabs	Off-Highway Trucks	1	8.00	402	0.38
4: Concrete Slabs	Plate Compactors	1	8.00	8	0.43
4: Concrete Slabs	Generator Sets	1	8.00	84	0.74
4: Concrete Slabs	Air Compressors	1	8.00	78	0.48
5: Perimeter Wall	Plate Compactors	1	8.00	8	0.43
5: Perimeter Wall	Generator Sets	1	8.00	84	0.74
5: Perimeter Wall	Air Compressors	1	8.00	78	0.48
6: Backfill and Grading	Off-Highway Trucks	1	8.00	402	0.38

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Plate Compactors	1	8.00	8	0.43
6: Backfill and Grading	Generator Sets	1	8.00	84	0.74
6: Backfill and Grading	Air Compressors	1	8.00	78	0.48
7: Electrical Equipment/Gate Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
7: Electrical Equipment/Gate Install	Cranes	1	8.00	231	0.29
7: Electrical Equipment/Gate Install	Generator Sets	1	8.00	84	0.74
7: Electrical Equipment/Gate Install	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
4: Concrete Slabs	5	26.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1: Site Excavation	6	26.00	0.00	291.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
2: Pile Driving	4	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
3: Concrete Foundations	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
5: Perimeter Wall	5	24.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
6: Backfill and Grading	5	24.00	0.00	469.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
7: Electrical Equipment/Gate Install	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Water Exposed Area

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1276	0.1406	2.4000e-004	7.1900e-003	7.1900e-003	6.9400e-003	6.9400e-003	6.9400e-003	6.9400e-003	0.0000	20.5276	20.5276	3.9200e-003	0.0000	20.6256
<b>Total</b>	<b>0.0146</b>	<b>0.1276</b>	<b>0.1406</b>	<b>2.4000e-004</b>	<b>6.1000e-004</b>	<b>7.1900e-003</b>	<b>7.8000e-003</b>	<b>8.0000e-005</b>	<b>6.9400e-003</b>	<b>7.0200e-003</b>	<b>0.0000</b>	<b>20.5276</b>	<b>20.5276</b>	<b>3.9200e-003</b>	<b>0.0000</b>	<b>20.6256</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2000e-003	0.1361	0.1102	2.4000e-004	7.1000e-004	7.1000e-004	7.1000e-004	7.1000e-004	7.1000e-004	7.1000e-004	0.0000	14.0277	14.0277	3.5500e-003	0.0000	14.1165
<b>Total</b>	<b>6.2000e-003</b>	<b>0.1361</b>	<b>0.1102</b>	<b>2.4000e-004</b>	<b>2.7000e-004</b>	<b>7.1000e-004</b>	<b>9.8000e-004</b>	<b>4.0000e-005</b>	<b>7.1000e-004</b>	<b>7.5000e-004</b>	<b>0.0000</b>	<b>14.0277</b>	<b>14.0277</b>	<b>3.5500e-003</b>	<b>0.0000</b>	<b>14.1165</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0233	0.2342	0.1655	4.1000e-004	0.0107	0.0107	0.0107	0.0103	0.0103	0.0103	0.0000	35.8069	35.8069	7.8300e-003	0.0000	36.0025
<b>Total</b>	<b>0.0233</b>	<b>0.2342</b>	<b>0.1655</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>0.0107</b>	<b>0.0107</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>35.8069</b>	<b>35.8069</b>	<b>7.8300e-003</b>	<b>0.0000</b>	<b>36.0025</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4400e-003	0.2580	0.1693	4.1000e-004	9.7000e-004	9.7000e-004	9.7000e-004	9.7000e-004	9.7000e-004	9.7000e-004	0.0000	26.7635	26.7635	7.3200e-003	0.0000	26.9464
<b>Total</b>	<b>8.4400e-003</b>	<b>0.2580</b>	<b>0.1693</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>9.7000e-004</b>	<b>9.7000e-004</b>	<b>0.0000</b>	<b>9.7000e-004</b>	<b>9.7000e-004</b>	<b>0.0000</b>	<b>26.7635</b>	<b>26.7635</b>	<b>7.3200e-003</b>	<b>0.0000</b>	<b>26.9464</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					5.5000e-004	0.0000	5.5000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1387	0.1340	3.0000e-004	6.6900e-003	6.6900e-003	6.6900e-003	6.4200e-003	6.4200e-003	6.4200e-003	0.0000	26.0672	26.0672	5.7100e-003	0.0000	0.0000	26.2099
<b>Total</b>	<b>0.0163</b>	<b>0.1387</b>	<b>0.1340</b>	<b>3.0000e-004</b>	<b>5.5000e-004</b>	<b>6.6900e-003</b>	<b>7.2400e-003</b>	<b>8.0000e-005</b>	<b>6.4200e-003</b>	<b>6.5000e-003</b>	<b>0.0000</b>	<b>26.0672</b>	<b>26.0672</b>	<b>5.7100e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>26.2099</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	0.0000	20.6712
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	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8300e-003	0.1799	0.1297	3.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	8.0000e-004	0.0000	19.8499	19.8499	5.3900e-003	0.0000	19.9847
<b>Total</b>	<b>6.8300e-003</b>	<b>0.1799</b>	<b>0.1297</b>	<b>3.0000e-004</b>	<b>2.5000e-004</b>	<b>8.0000e-004</b>	<b>1.0500e-003</b>	<b>4.0000e-005</b>	<b>8.0000e-004</b>	<b>8.4000e-004</b>	<b>0.0000</b>	<b>19.8499</b>	<b>19.8499</b>	<b>5.3900e-003</b>	<b>0.0000</b>	<b>19.9847</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	20.6712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.5.3: Concrete Foundations - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0152	0.1454	0.1160	2.1000e-004	7.6900e-003	7.6900e-003	7.6900e-003	7.3800e-003	7.3800e-003	7.3800e-003	0.0000	18.5396	18.5396	3.4100e-003	0.0000	18.6250
<b>Total</b>	<b>0.0152</b>	<b>0.1454</b>	<b>0.1160</b>	<b>2.1000e-004</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>0.0000</b>	<b>18.5396</b>	<b>18.5396</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>18.6250</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.5 3: Concrete Foundations - 2020**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	4.8300e-003	0.1215	0.0864	2.1000e-004	5.8000e-004	5.8000e-004	5.8000e-004	5.8000e-004	5.8000e-004	5.8000e-004	0.0000	12.3223	12.3223	3.0600e-003	0.0000	12.3989
<b>Total</b>	<b>4.8300e-003</b>	<b>0.1215</b>	<b>0.0864</b>	<b>2.1000e-004</b>	<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>12.3223</b>	<b>12.3223</b>	<b>3.0600e-003</b>	<b>0.0000</b>	<b>12.3989</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.6.7: Electrical Equipment/Gate Install - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0119	0.1135	0.0983	1.8000e-004	5.7200e-003	5.7200e-003	5.7200e-003	5.4800e-003	5.4800e-003	5.4800e-003	0.0000	16.0122	16.0122	2.8900e-003	0.0000	16.0845
<b>Total</b>	<b>0.0119</b>	<b>0.1135</b>	<b>0.0983</b>	<b>1.8000e-004</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>0.0000</b>	<b>16.0122</b>	<b>16.0122</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>16.0845</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.6 7: Electrical Equipment/Gate Install - 2021**  
**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	4.1700e-003	0.1049	0.0746	1.8000e-004	5.0000e-004	5.0000e-004	5.0000e-004	5.0000e-004	5.0000e-004	5.0000e-004	0.0000	10.6427	10.6427	2.6200e-003	0.0000	10.7082
<b>Total</b>	<b>4.1700e-003</b>	<b>0.1049</b>	<b>0.0746</b>	<b>1.8000e-004</b>	<b>5.0000e-004</b>	<b>5.0000e-004</b>	<b>5.0000e-004</b>	<b>5.0000e-004</b>	<b>5.0000e-004</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>10.6427</b>	<b>10.6427</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>10.7082</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0319	0.2809	0.2427	5.3000e-004		0.0140	0.0140		0.0134	0.0134	0.0000	46.2095	46.2095	0.0102	0.0000	46.4654
<b>Total</b>	<b>0.0319</b>	<b>0.2809</b>	<b>0.2427</b>	<b>5.3000e-004</b>		<b>0.0140</b>	<b>0.0140</b>		<b>0.0134</b>	<b>0.0134</b>	<b>0.0000</b>	<b>46.2095</b>	<b>46.2095</b>	<b>0.0102</b>	<b>0.0000</b>	<b>46.4654</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0121	0.3189	0.2299	5.3000e-004	1.4200e-003	1.4200e-003	1.4200e-003	1.4200e-003	1.4200e-003	1.4200e-003	0.0000	35.1879	35.1879	9.6100e-003	0.0000	35.4283
<b>Total</b>	<b>0.0121</b>	<b>0.3189</b>	<b>0.2299</b>	<b>5.3000e-004</b>	<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>1.4200e-003</b>	<b>0.0000</b>	<b>35.1879</b>	<b>35.1879</b>	<b>9.6100e-003</b>	<b>0.0000</b>	<b>35.4283</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0271	0.2560	0.2043	3.8000e-004		0.0135	0.0135		0.0129	0.0129	0.0000	32.6173	32.6173	5.9600e-003	0.0000	32.7662
<b>Total</b>	<b>0.0271</b>	<b>0.2560</b>	<b>0.2043</b>	<b>3.8000e-004</b>		<b>0.0135</b>	<b>0.0135</b>		<b>0.0129</b>	<b>0.0129</b>	<b>0.0000</b>	<b>32.6173</b>	<b>32.6173</b>	<b>5.9600e-003</b>	<b>0.0000</b>	<b>32.7662</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	8.3500e-003	0.2099	0.1493	3.8000e-004	1.0000e-003	1.0000e-003	1.0000e-003	1.0000e-003	1.0000e-003	1.0000e-003	0.0000	21.8783	21.8783	5.3500e-003	0.0000	22.0122
<b>Total</b>	<b>8.3500e-003</b>	<b>0.2099</b>	<b>0.1493</b>	<b>3.8000e-004</b>	<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>1.0000e-003</b>	<b>0.0000</b>	<b>21.8783</b>	<b>21.8783</b>	<b>5.3500e-003</b>	<b>0.0000</b>	<b>22.0122</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.4000e-004	6.1000e-003	5.2800e-003	1.0000e-005	3.1000e-004	3.1000e-004	3.1000e-004	2.9000e-004	2.9000e-004	2.9000e-004	0.0000	0.8584	0.8584	1.5000e-004	0.0000	0.8622
<b>Total</b>	<b>6.4000e-004</b>	<b>6.1000e-003</b>	<b>5.2800e-003</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>0.8584</b>	<b>0.8584</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.8622</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

BCTD DB-130 - San Francisco County, Annual

**3.8 5: Perimeter Wall - 2021**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	2.2000e-004	5.5200e-003	3.9300e-003	1.0000e-005	3.0000e-005	3.0000e-005	3.0000e-005	3.0000e-005	3.0000e-005	3.0000e-005	0.0000	0.5758	0.5758	1.4000e-004	0.0000	0.5793
<b>Total</b>	<b>2.2000e-004</b>	<b>5.5200e-003</b>	<b>3.9300e-003</b>	<b>1.0000e-005</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5758</b>	<b>0.5758</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.5793</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

**4.0 Operational Detail - Mobile**

BCTD DB-130 - San Francisco County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-O or C-NW	Primary	Diverted	Pass-by		
User Defined Industrial	9.50	7.30	7.30	0.00	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
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477





**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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BCTD DB-130 - San Francisco County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-130 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

BCTD DB-130 - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

BCTD DB-130 - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-130 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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BCTD DB-130 - San Francisco County, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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BCTD DB-130 - San Francisco County, Annual

**BCTD DB-130**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.31	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2021

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

BCTD DB-130 - San Francisco County, Annual

Project Characteristics -

Land Use - Project specific acreage based on 13,400 sq. ft.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment.

Grading - Assumes approximately 2,325 CY of material export and 3,750 CY of material import.

Trips and VMT - Based on 10-13 workers per day per phase and approximately 1,455 CY of concrete placement (modeled as concrete truck trips). Haul truck capacity assumed to be 16 CY.

Construction Off-road Equipment Mitigation - Assumes fugitive dust control and Tier 4 Final engines. Assumes generator is electric.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

BCTD DB-130 - San Francisco County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	2.00	32.00
tblConstructionPhase	NumDays	1.00	23.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	100.00	39.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	PhaseEndDate	10/23/2020	9/15/2020
tblConstructionPhase	PhaseEndDate	6/3/2020	8/14/2020
tblConstructionPhase	PhaseEndDate	6/1/2020	7/1/2020
tblConstructionPhase	PhaseEndDate	3/12/2021	11/9/2020
tblConstructionPhase	PhaseEndDate	7/30/2021	1/1/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	2/2/2021
tblConstructionPhase	PhaseEndDate	6/5/2020	3/1/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	8/15/2020
tblConstructionPhase	PhaseStartDate	6/2/2020	7/2/2020
tblConstructionPhase	PhaseStartDate	10/24/2020	9/16/2020
tblConstructionPhase	PhaseStartDate	3/13/2021	11/10/2020
tblConstructionPhase	PhaseStartDate	6/4/2020	1/2/2021
tblConstructionPhase	PhaseStartDate	6/6/2020	2/3/2021
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	2,325.00
tblGrading	MaterialImported	0.00	3,750.00
tblLandUse	LotAcreage	0.00	0.31

BCTD DB-130 - San Francisco County, Annual

tbOffRoadEquipment	OffRoadEquipmentType	Excavators	
tbOffRoadEquipment	OffRoadEquipmentType	Off-Highway Trucks	
tbOffRoadEquipment	OffRoadEquipmentType	Plate Compactors	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentType	Bore/Drill Rigs	
tbOffRoadEquipment	OffRoadEquipmentType	Cranes	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentType	Off-Highway Trucks	
tbOffRoadEquipment	OffRoadEquipmentType	Plate Compactors	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentType	Off-Highway Trucks	
tbOffRoadEquipment	OffRoadEquipmentType	Plate Compactors	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	
tbOffRoadEquipment	OffRoadEquipmentType	Cranes	
tbOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbOffRoadEquipment	OffRoadEquipmentType	Air Compressors	
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	



BCTD DB-130 - San Francisco County, Annual

tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tbOffRoadEquipment	PhaseName		1:Site Excavation
tbOffRoadEquipment	PhaseName		1:Site Excavation
tbOffRoadEquipment	PhaseName		1:Site Excavation
tbOffRoadEquipment	PhaseName		1:Site Excavation
tbOffRoadEquipment	PhaseName		1:Site Excavation
tbOffRoadEquipment	PhaseName		2: Pile Driving
tbOffRoadEquipment	PhaseName		2: Pile Driving
tbOffRoadEquipment	PhaseName		2: Pile Driving
tbOffRoadEquipment	PhaseName		2: Pile Driving
tbOffRoadEquipment	PhaseName		3: Concrete Foundations
tbOffRoadEquipment	PhaseName		3: Concrete Foundations
tbOffRoadEquipment	PhaseName		4: Concrete Slabs
tbOffRoadEquipment	PhaseName		4: Concrete Slabs
tbOffRoadEquipment	PhaseName		4: Concrete Slabs
tbOffRoadEquipment	PhaseName		4: Concrete Slabs

BCTD DB-130 - San Francisco County, Annual

tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	5: Perimeter Wall	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	6: Backfill and Grading	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	PhaseName	7: Electrical Equipment/Gate Install	
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	4.00	8.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	8.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	1.00	0.00
tbIOffRoadEquipment	UsageHours	1.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	0.00
tbIOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	26.00

BCTD DB-130 - San Francisco County, Annual

tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	22.00
tblTripsAndVMT	WorkerTripNumber	0.00	26.00
tblTripsAndVMT	WorkerTripNumber	0.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	22.00

**2.0 Emissions Summary**

BCTD DB-130 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.1194	1.1225	0.9322	2.1000e-003	0.0187	0.0534	0.0721	4.9500e-003	0.0513	0.0562	0.0000	185.7258	185.7258	0.0347	0.0000	186.5931
2021	0.0320	0.3352	0.2726	7.3000e-004	8.3400e-003	0.0130	0.0213	2.1900e-003	0.0124	0.0146	0.0000	67.0952	67.0952	0.0126	0.0000	67.4104
<b>Maximum</b>	<b>0.1194</b>	<b>1.1225</b>	<b>0.9322</b>	<b>2.1000e-003</b>	<b>0.0187</b>	<b>0.0534</b>	<b>0.0721</b>	<b>4.9500e-003</b>	<b>0.0513</b>	<b>0.0562</b>	<b>0.0000</b>	<b>185.7258</b>	<b>185.7258</b>	<b>0.0347</b>	<b>0.0000</b>	<b>186.5931</b>

**Mitigated Construction**

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2020	0.0220	0.1418	0.7514	2.1000e-003	0.0184	2.3100e-003	0.0207	4.9000e-003	2.3000e-003	7.2000e-003	0.0000	142.2047	142.2047	0.0322	0.0000	143.0107
2021	7.2800e-003	0.0947	0.2266	7.3000e-004	8.0300e-003	8.0000e-004	8.8300e-003	2.1400e-003	7.8000e-004	2.9300e-003	0.0000	55.2258	55.2258	0.0120	0.0000	55.5259
<b>Maximum</b>	<b>0.0220</b>	<b>0.1418</b>	<b>0.7514</b>	<b>2.1000e-003</b>	<b>0.0184</b>	<b>2.3100e-003</b>	<b>0.0207</b>	<b>4.9000e-003</b>	<b>2.3000e-003</b>	<b>7.2000e-003</b>	<b>0.0000</b>	<b>142.2047</b>	<b>142.2047</b>	<b>0.0322</b>	<b>0.0000</b>	<b>143.0107</b>

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>80.64</b>	<b>83.77</b>	<b>18.82</b>	<b>0.00</b>	<b>2.37</b>	<b>68.39</b>	<b>1.40</b>	<b>95.17</b>	<b>85.70</b>	<b>0.00</b>	<b>21.91</b>	<b>21.91</b>	<b>6.47</b>	<b>0.00</b>	<b>21.84</b>

BCTD DB-130 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.5307	0.0856
2	9-1-2020	11-30-2020	0.5267	0.0570
3	12-1-2020	2-28-2021	0.5455	0.1232
4	3-1-2021	5-31-2021	0.0048	0.0003
		Highest	0.5455	0.1232

**2.2 Overall Operational**

**Unmitigated Operational**

Category	tons/yr											MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005	
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Waste																		
Water																		
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

BCTD DB-130 - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

BCTD DB-130 - San Francisco County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1: Site Excavation	Site Preparation	6/1/2020	7/1/2020	5	23	
2	2: Pile Driving	Grading	7/2/2020	8/14/2020	5	32	
3	6: Backfill and Grading	Grading	1/2/2021	2/2/2021	5	22	
4	3: Concrete Foundations	Building Construction	8/15/2020	9/15/2020	5	22	
5	7: Electrical Equipment/Gate Install	Trenching	2/3/2021	3/1/2021	5	19	
6	4: Concrete Slabs	Building Construction	9/16/2020	11/9/2020	5	39	
7	5: Perimeter Wall	Building Construction	11/10/2020	1/1/2021	5	39	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
6: Backfill and Grading	Concrete/Industrial Saws	0	0.00	81	0.73
4: Concrete Slabs	Cranes	0	0.00	231	0.29
5: Perimeter Wall	Cranes	1	8.00	231	0.29
2: Pile Driving	Concrete/Industrial Saws	0	0.00	81	0.73
3: Concrete Foundations	Cranes	1	8.00	231	0.29
3: Concrete Foundations	Forklifts	0	0.00	89	0.20
1: Site Excavation	Graders	0	0.00	187	0.41
4: Concrete Slabs	Forklifts	0	0.00	89	0.20
5: Perimeter Wall	Forklifts	0	0.00	89	0.20

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Rubber Tired Dozers	0	0.00	247	0.40
2: Pile Driving	Rubber Tired Dozers	0	0.00	247	0.40
3: Concrete Foundations	Tractors/Loaders/Backhoes	1	8.00	97	0.37
4: Concrete Slabs	Tractors/Loaders/Backhoes	1	8.00	97	0.37
2: Pile Driving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
5: Perimeter Wall	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
6: Backfill and Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
1: Site Excavation	Excavators	1	8.00	158	0.38
1: Site Excavation	Off-Highway Trucks	1	1.00	402	0.38
1: Site Excavation	Plate Compactors	1	2.00	8	0.43
1: Site Excavation	Generator Sets	1	8.00	84	0.74
1: Site Excavation	Air Compressors	1	8.00	78	0.48
2: Pile Driving	Bore/Drill Rigs	1	8.00	221	0.50
2: Pile Driving	Cranes	1	8.00	231	0.29
2: Pile Driving	Generator Sets	1	8.00	84	0.74
2: Pile Driving	Air Compressors	1	8.00	78	0.48
3: Concrete Foundations	Generator Sets	1	8.00	84	0.74
3: Concrete Foundations	Air Compressors	1	8.00	78	0.48
4: Concrete Slabs	Off-Highway Trucks	1	8.00	402	0.38
4: Concrete Slabs	Plate Compactors	1	8.00	8	0.43
4: Concrete Slabs	Generator Sets	1	8.00	84	0.74
4: Concrete Slabs	Air Compressors	1	8.00	78	0.48
5: Perimeter Wall	Plate Compactors	1	8.00	8	0.43
5: Perimeter Wall	Generator Sets	1	8.00	84	0.74
5: Perimeter Wall	Air Compressors	1	8.00	78	0.48
6: Backfill and Grading	Off-Highway Trucks	1	8.00	402	0.38

BCTD DB-130 - San Francisco County, Annual

6: Backfill and Grading	Plate Compactors	1	8.00	8	0.43
6: Backfill and Grading	Generator Sets	1	8.00	84	0.74
6: Backfill and Grading	Air Compressors	1	8.00	78	0.48
7: Electrical Equipment/Gate Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
7: Electrical Equipment/Gate Install	Cranes	1	8.00	231	0.29
7: Electrical Equipment/Gate Install	Generator Sets	1	8.00	84	0.74
7: Electrical Equipment/Gate Install	Air Compressors	1	8.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
4: Concrete Slabs	5	26.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
1: Site Excavation	6	26.00	0.00	291.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
2: Pile Driving	4	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
3: Concrete Foundations	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
5: Perimeter Wall	5	24.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
6: Backfill and Grading	5	24.00	0.00	469.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
7: Electrical Equipment/Gate Install	4	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1276	0.1406	2.4000e-004	7.1900e-003	7.1900e-003	6.9400e-003	6.9400e-003	6.9400e-003	6.9400e-003	0.0000	20.5276	20.5276	3.9200e-003	0.0000	20.6256
<b>Total</b>	<b>0.0146</b>	<b>0.1276</b>	<b>0.1406</b>	<b>2.4000e-004</b>	<b>6.1000e-004</b>	<b>7.1900e-003</b>	<b>7.8000e-003</b>	<b>8.0000e-005</b>	<b>6.9400e-003</b>	<b>7.0200e-003</b>	<b>0.0000</b>	<b>20.5276</b>	<b>20.5276</b>	<b>3.9200e-003</b>	<b>0.0000</b>	<b>20.6256</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.2 1:Site Excavation - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8600e-003	8.0400e-003	0.1086	2.4000e-004	2.5000e-004	2.5000e-004	2.5000e-004	2.5000e-004	2.5000e-004	2.5000e-004	0.0000	14.0277	14.0277	3.5500e-003	0.0000	14.1165
<b>Total</b>	<b>1.8600e-003</b>	<b>8.0400e-003</b>	<b>0.1086</b>	<b>2.4000e-004</b>	<b>2.7000e-004</b>	<b>2.5000e-004</b>	<b>5.2000e-004</b>	<b>4.0000e-005</b>	<b>2.5000e-004</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>14.0277</b>	<b>14.0277</b>	<b>3.5500e-003</b>	<b>0.0000</b>	<b>14.1165</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.1600e-003	0.0507	0.0150	1.2000e-004	2.4400e-003	1.5000e-004	2.5900e-003	6.7000e-004	1.4000e-004	8.1000e-004	0.0000	12.9982	12.9982	2.3300e-003	0.0000	13.0564
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	9.1000e-004	6.0000e-004	6.7200e-003	2.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.2455	2.2455	5.0000e-005	0.0000	2.2467
<b>Total</b>	<b>2.0700e-003</b>	<b>0.0513</b>	<b>0.0217</b>	<b>1.4000e-004</b>	<b>4.8000e-003</b>	<b>1.7000e-004</b>	<b>4.9700e-003</b>	<b>1.3000e-003</b>	<b>1.6000e-004</b>	<b>1.4600e-003</b>	<b>0.0000</b>	<b>15.2437</b>	<b>15.2437</b>	<b>2.3800e-003</b>	<b>0.0000</b>	<b>15.3031</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0233	0.2342	0.1655	4.1000e-004	0.0107	0.0107	0.0107	0.0103	0.0103	0.0103	0.0000	35.8069	35.8069	7.8300e-003	0.0000	36.0025
<b>Total</b>	<b>0.0233</b>	<b>0.2342</b>	<b>0.1655</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>0.0107</b>	<b>0.0107</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0103</b>	<b>0.0000</b>	<b>35.8069</b>	<b>35.8069</b>	<b>7.8300e-003</b>	<b>0.0000</b>	<b>36.0025</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.3.2: Pile Driving - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6400e-003	0.0158	0.1493	4.1000e-004	4.9000e-004	4.9000e-004	4.9000e-004	4.9000e-004	4.9000e-004	4.9000e-004	0.0000	26.7635	26.7635	7.3200e-003	0.0000	26.9464
<b>Total</b>	<b>3.6400e-003</b>	<b>0.0158</b>	<b>0.1493</b>	<b>4.1000e-004</b>	<b>0.0000</b>	<b>4.9000e-004</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>4.9000e-004</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>26.7635</b>	<b>26.7635</b>	<b>7.3200e-003</b>	<b>0.0000</b>	<b>26.9464</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	9.7000e-004	6.5000e-004	7.1900e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.7000e-004	2.0000e-005	6.9000e-004	0.0000	2.4032	2.4032	5.0000e-005	0.0000	2.4045
<b>Total</b>	<b>9.7000e-004</b>	<b>6.5000e-004</b>	<b>7.1900e-003</b>	<b>3.0000e-005</b>	<b>2.5300e-003</b>	<b>2.0000e-005</b>	<b>2.5500e-003</b>	<b>6.7000e-004</b>	<b>2.0000e-005</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>2.4032</b>	<b>2.4032</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>2.4045</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					5.5000e-004	0.0000	5.5000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0163	0.1387	0.1340	3.0000e-004	6.6900e-003	6.6900e-003	6.6900e-003	6.4200e-003	6.4200e-003	6.4200e-003	0.0000	26.0672	26.0672	5.7100e-003	0.0000	26.2099
<b>Total</b>	<b>0.0163</b>	<b>0.1387</b>	<b>0.1340</b>	<b>3.0000e-004</b>	<b>5.5000e-004</b>	<b>6.6900e-003</b>	<b>7.2400e-003</b>	<b>8.0000e-005</b>	<b>6.4200e-003</b>	<b>6.5000e-003</b>	<b>0.0000</b>	<b>26.0672</b>	<b>26.0672</b>	<b>5.7100e-003</b>	<b>0.0000</b>	<b>26.2099</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	20.6712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.4 6: Backfill and Grading - 2021**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0114	0.1178	3.0000e-004	3.5000e-004	3.5000e-004	3.5000e-004	3.5000e-004	3.5000e-004	3.5000e-004	0.0000	19.8499	19.8499	5.3900e-003	0.0000	19.9847
<b>Total</b>	<b>2.6300e-003</b>	<b>0.0114</b>	<b>0.1178</b>	<b>3.0000e-004</b>	<b>2.5000e-004</b>	<b>3.5000e-004</b>	<b>6.0000e-004</b>	<b>4.0000e-005</b>	<b>3.5000e-004</b>	<b>3.9000e-004</b>	<b>0.0000</b>	<b>19.8499</b>	<b>19.8499</b>	<b>5.3900e-003</b>	<b>0.0000</b>	<b>19.9847</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.7800e-003	0.0757	0.0248	1.9000e-004	3.9300e-003	2.2000e-004	4.1500e-003	1.0800e-003	2.1000e-004	1.2900e-003	0.0000	20.5768	20.5768	3.7700e-003	0.0000	20.6712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.5000e-004	4.8000e-004	5.4900e-003	2.0000e-005	2.0900e-003	2.0000e-005	2.1000e-003	5.5000e-004	1.0000e-005	5.7000e-004	0.0000	1.9118	1.9118	4.0000e-005	0.0000	1.9128
<b>Total</b>	<b>2.5300e-003</b>	<b>0.0762</b>	<b>0.0303</b>	<b>2.1000e-004</b>	<b>6.0200e-003</b>	<b>2.4000e-004</b>	<b>6.2500e-003</b>	<b>1.6300e-003</b>	<b>2.2000e-004</b>	<b>1.8600e-003</b>	<b>0.0000</b>	<b>22.4886</b>	<b>22.4886</b>	<b>3.8100e-003</b>	<b>0.0000</b>	<b>22.5840</b>

BCTD DB-130 - San Francisco County, Annual

**3.5.3: Concrete Foundations - 2020**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0152	0.1454	0.1160	2.1000e-004	7.6900e-003	7.6900e-003	7.6900e-003	7.3800e-003	7.3800e-003	7.3800e-003	0.0000	18.5396	18.5396	3.4100e-003	0.0000	18.6250
<b>Total</b>	<b>0.0152</b>	<b>0.1454</b>	<b>0.1160</b>	<b>2.1000e-004</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.6900e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>7.3800e-003</b>	<b>0.0000</b>	<b>18.5396</b>	<b>18.5396</b>	<b>3.4100e-003</b>	<b>0.0000</b>	<b>18.6250</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.5 3: Concrete Foundations - 2020**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.6300e-003	7.0800e-003	0.0812	2.1000e-004	2.2000e-004	2.2000e-004	2.2000e-004	2.2000e-004	2.2000e-004	2.2000e-004	0.0000	12.3223	12.3223	3.0600e-003	0.0000	12.3989
<b>Total</b>	<b>1.6300e-003</b>	<b>7.0800e-003</b>	<b>0.0812</b>	<b>2.1000e-004</b>	<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>12.3223</b>	<b>12.3223</b>	<b>3.0600e-003</b>	<b>0.0000</b>	<b>12.3989</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4000e-004	4.9000e-004	5.4400e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9300e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.8174	1.8174	4.0000e-005	0.0000	1.8184
<b>Total</b>	<b>7.4000e-004</b>	<b>4.9000e-004</b>	<b>5.4400e-003</b>	<b>2.0000e-005</b>	<b>1.9100e-003</b>	<b>1.0000e-005</b>	<b>1.9300e-003</b>	<b>5.1000e-004</b>	<b>1.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>1.8174</b>	<b>1.8174</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.8184</b>

BCTD DB-130 - San Francisco County, Annual

**3.6.7: Electrical Equipment/Gate Install - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0119	0.1135	0.0983	1.8000e-004	5.7200e-003	5.7200e-003	5.7200e-003	5.4800e-003	5.4800e-003	5.4800e-003	0.0000	16.0122	16.0122	2.8900e-003	0.0000	16.0845
<b>Total</b>	<b>0.0119</b>	<b>0.1135</b>	<b>0.0983</b>	<b>1.8000e-004</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.7200e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>5.4800e-003</b>	<b>0.0000</b>	<b>16.0122</b>	<b>16.0122</b>	<b>2.8900e-003</b>	<b>0.0000</b>	<b>16.0845</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.6 7: Electrical Equipment/Gate Install - 2021**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	1.4100e-003	6.1100e-003	0.0702	1.8000e-004	1.9000e-004	1.9000e-004	1.9000e-004	1.9000e-004	1.9000e-004	1.9000e-004	0.0000	10.6427	10.6427	2.6200e-003	0.0000	10.7082
<b>Total</b>	<b>1.4100e-003</b>	<b>6.1100e-003</b>	<b>0.0702</b>	<b>1.8000e-004</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>10.6427</b>	<b>10.6427</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>10.7082</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	3.8000e-004	4.3400e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5135	1.5135	3.0000e-005	0.0000	1.5143
<b>Total</b>	<b>5.9000e-004</b>	<b>3.8000e-004</b>	<b>4.3400e-003</b>	<b>2.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.5135</b>	<b>1.5135</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.5143</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0319	0.2809	0.2427	5.3000e-004		0.0140	0.0140		0.0134	0.0134	0.0000	46.2095	46.2095	0.0102	0.0000	46.4654
<b>Total</b>	<b>0.0319</b>	<b>0.2809</b>	<b>0.2427</b>	<b>5.3000e-004</b>		<b>0.0140</b>	<b>0.0140</b>		<b>0.0134</b>	<b>0.0134</b>	<b>0.0000</b>	<b>46.2095</b>	<b>46.2095</b>	<b>0.0102</b>	<b>0.0000</b>	<b>46.4654</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.7 4: Concrete Slabs - 2020**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	4.6700e-003	0.0202	0.2089	5.3000e-004	6.2000e-004	6.2000e-004	6.2000e-004	6.2000e-004	6.2000e-004	6.2000e-004	0.0000	35.1879	35.1879	9.6100e-003	0.0000	35.4283
<b>Total</b>	<b>4.6700e-003</b>	<b>0.0202</b>	<b>0.2089</b>	<b>5.3000e-004</b>	<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>35.1879</b>	<b>35.1879</b>	<b>9.6100e-003</b>	<b>0.0000</b>	<b>35.4283</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0122	3.6100e-003	3.0000e-005	6.4000e-004	5.0000e-005	6.9000e-004	1.8000e-004	5.0000e-005	2.4000e-004	0.0000	2.6989	2.6989	3.6000e-004	0.0000	2.7079
Worker	1.5400e-003	1.0300e-003	0.0114	4.0000e-005	4.0100e-003	3.0000e-005	4.0400e-003	1.0700e-003	3.0000e-005	1.0900e-003	0.0000	3.8075	3.8075	8.0000e-005	0.0000	3.8096
<b>Total</b>	<b>1.9000e-003</b>	<b>0.0132</b>	<b>0.0150</b>	<b>7.0000e-005</b>	<b>4.6500e-003</b>	<b>8.0000e-005</b>	<b>4.7300e-003</b>	<b>1.2500e-003</b>	<b>8.0000e-005</b>	<b>1.3300e-003</b>	<b>0.0000</b>	<b>6.5064</b>	<b>6.5064</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>6.5175</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0271	0.2560	0.2043	3.8000e-004		0.0135	0.0135		0.0129	0.0129	0.0000	32.6173	32.6173	5.9600e-003	0.0000	32.7662
<b>Total</b>	<b>0.0271</b>	<b>0.2560</b>	<b>0.2043</b>	<b>3.8000e-004</b>		<b>0.0135</b>	<b>0.0135</b>		<b>0.0129</b>	<b>0.0129</b>	<b>0.0000</b>	<b>32.6173</b>	<b>32.6173</b>	<b>5.9600e-003</b>	<b>0.0000</b>	<b>32.7662</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2020**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	2.8200e-003	0.0122	0.1403	3.8000e-004	0.0000	21.8783	21.8783	5.3500e-003	0.0000	22.0122						
<b>Total</b>	<b>2.8200e-003</b>	<b>0.0122</b>	<b>0.1403</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>21.8783</b>	<b>21.8783</b>	<b>5.3500e-003</b>	<b>0.0000</b>	<b>22.0122</b>						

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.5000e-004	0.0119	3.5100e-003	3.0000e-005	6.2000e-004	5.0000e-005	6.7000e-004	1.8000e-004	5.0000e-005	2.3000e-004	0.0000	2.6297	2.6297	3.5000e-004	0.0000	2.6385
Worker	1.3900e-003	9.2000e-004	0.0103	4.0000e-005	3.6000e-003	3.0000e-005	3.6300e-003	9.6000e-004	3.0000e-005	9.8000e-004	0.0000	3.4245	3.4245	8.0000e-005	0.0000	3.4264
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0128</b>	<b>0.0138</b>	<b>7.0000e-005</b>	<b>4.2200e-003</b>	<b>8.0000e-005</b>	<b>4.3000e-003</b>	<b>1.1400e-003</b>	<b>8.0000e-005</b>	<b>1.2100e-003</b>	<b>0.0000</b>	<b>6.0542</b>	<b>6.0542</b>	<b>4.3000e-004</b>	<b>0.0000</b>	<b>6.0649</b>

BCTD DB-130 - San Francisco County, Annual

**3.8.5: Perimeter Wall - 2021**  
**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.4000e-004	6.1000e-003	5.2800e-003	1.0000e-005	3.1000e-004	3.1000e-004	3.1000e-004	2.9000e-004	2.9000e-004	2.9000e-004	0.0000	0.8584	0.8584	1.5000e-004	0.0000	0.8622
<b>Total</b>	<b>6.4000e-004</b>	<b>6.1000e-003</b>	<b>5.2800e-003</b>	<b>1.0000e-005</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>3.1000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>2.9000e-004</b>	<b>0.0000</b>	<b>0.8584</b>	<b>0.8584</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.8622</b>

**Unmitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

BCTD DB-130 - San Francisco County, Annual

**3.8 5: Perimeter Wall - 2021**  
**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	7.0000e-005	3.2000e-004	3.6900e-003	1.0000e-005	0.0000	0.5758	0.5758	1.4000e-004	0.0000	0.5793						
<b>Total</b>	<b>7.0000e-005</b>	<b>3.2000e-004</b>	<b>3.6900e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.5758</b>	<b>0.5758</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>0.5793</b>						

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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	1.0000e-005	2.9000e-004	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0683	0.0683	1.0000e-005	0.0000	0.0686
Worker	3.0000e-005	2.0000e-005	2.5000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0869	0.0869	0.0000	0.0000	0.0870
<b>Total</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2000e-004</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1552</b>	<b>0.1552</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.1555</b>

**4.0 Operational Detail - Mobile**

BCTD DB-130 - San Francisco County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-C	H-O or C-NW	H-S or C-C	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	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
User Defined Industrial	0.606408	0.040118	0.191445	0.088323	0.014900	0.004926	0.028280	0.008891	0.004289	0.004272	0.006741	0.000931	0.000477





**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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BCTD DB-130 - San Francisco County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-130 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

BCTD DB-130 - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

BCTD DB-130 - San Francisco County, Annual

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-130 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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BCTD DB-130 - San Francisco County, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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## **DB-128R2 CalEEMod Runs**

BCTD DB-128R2 - San Francisco County, Annual

**BCTD DB-128R2**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.50	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2020

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project acreage based on trenching limits from Construction Length and Phasing Map, assuming 15 ft width.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment. Off highway truck to account for asphalt truck. Other construction equipment to account for jackhammer.

Grading - Based on material excavation (expanded): 9,711 CY; material backfill: 7,355 CY.

Trips and VMT - Based on 15 workers per day, 4 concrete daily truck trips (modeled as vendor trips), and total haul trips based on 16 CY capacity dump truck. Default miles.

Construction Off-road Equipment Mitigation - Watering twice per day in accordance with BAAQMD BMPs. Tier 2 engines, B20 Fuel. Generator assumed to be electrical.

BCTD DB-128R2 - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	FuelType	Diesel	Bio-diesel
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	6.00	218.00
tblConstructionPhase	PhaseEndDate	4/10/2019	12/31/2019
tblConstructionPhase	PhaseStartDate	4/3/2019	3/1/2019
tblGrading	MaterialExported	0.00	9,711.00
tblGrading	MaterialImported	0.00	7,355.00

BCTD DB-128R2 - San Francisco County, Annual

tblLandUse	LotAcreage	0.00	2.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00

2.0 Emissions Summary

BCTD DB-128R2 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815
Maximum	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.1504	4.3846	2.9136	6.6900e-003	0.0506	0.1083	0.1589	0.0136	0.1082	0.1218	80.9195	470.1958	551.1153	0.1344	0.0000	554.4759
Maximum	0.1504	4.3846	2.9136	6.6900e-003	0.0506	0.1083	0.1589	0.0136	0.1082	0.1218	80.9195	470.1958	551.1153	0.1344	0.0000	554.4759

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	60.03	-9.78	5.51	0.00	2.68	40.00	31.65	1.52	36.40	33.78	0.00	23.26	10.05	2.82	0.00	10.01

BCTD DB-128R2 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2019	5-31-2019	1.3151	1.3648
2	6-1-2019	8-31-2019	1.3134	1.3630
3	9-1-2019	9-30-2019	0.4283	0.4445
		Highest	1.3151	1.3648

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr										MT/yr							
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e		
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005	
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Waste																		
Water																		
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	

BCTD DB-128R2 - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Grading	3/1/2019	12/31/2019	5	218	

**Acres of Grading (Site Preparation Phase): 0**

BCTD DB-128R2 - San Francisco County, Annual

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	1	8.00	158	0.38
Trenching	Other Construction Equipment	2	8.00	172	0.42
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Off-Highway Trucks	1	8.00	402	0.38
Trenching	Rollers	1	8.00	80	0.38
Trenching	Rubber Tired Dozers	0	0.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Graders	0	0.00	187	0.41

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	8	30.00	8.00	2,133.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

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**3.2 Trenching - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Fugitive Dust	0.3518	3.4656	2.8553	5.2500e-003	2.5200e-003	0.0000	2.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3518	3.4656	2.8553	5.2500e-003	0.1780	0.1780	0.1780	0.1678	0.1678	0.1678	0.0000	466.2056	466.2056	0.1175	0.0000	469.1430
<b>Total</b>	<b>0.3518</b>	<b>3.4656</b>	<b>2.8553</b>	<b>5.2500e-003</b>	<b>2.5200e-003</b>	<b>0.1780</b>	<b>0.1806</b>	<b>3.8000e-004</b>	<b>0.1678</b>	<b>0.1681</b>	<b>0.0000</b>	<b>466.2056</b>	<b>466.2056</b>	<b>0.1175</b>	<b>0.0000</b>	<b>469.1430</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

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**3.2 Trenching - 2019**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1260	3.8562	2.6855	5.2500e-003	1.1300e-003	0.1058	0.1058	0.1058	0.1058	0.1058	80.9195	323.6780	404.5975	0.1136	0.0000	407.4373	
<b>Total</b>	<b>0.1260</b>	<b>3.8562</b>	<b>2.6855</b>	<b>5.2500e-003</b>	<b>1.1300e-003</b>	<b>0.1058</b>	<b>0.1070</b>	<b>1.7000e-004</b>	<b>0.1058</b>	<b>0.1060</b>	<b>80.9195</b>	<b>323.6780</b>	<b>404.5975</b>	<b>0.1136</b>	<b>0.0000</b>	<b>407.4373</b>	

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

**4.0 Operational Detail - Mobile**

BCTD DB-128R2 - San Francisco County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
User Defined Industrial	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
User Defined Industrial	0.607015	0.041018	0.191033	0.097570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460





**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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BCTD DB-128R2 - San Francisco County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-128R2 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-128R2 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	MT/yr			
		Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

### Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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## 11.0 Vegetation

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BCTD DB-128R2 - San Francisco County, Annual

**BCTD DB-128R2**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.50	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2020

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project acreage based on trenching limits from Construction Length and Phasing Map, assuming 15 ft width.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment. Off highway truck to account for asphalt truck. Other construction equipment to account for jackhammer.

Grading - Based on material excavation (expanded): 9,711 CY; material backfill: 7,355 CY.

Trips and VMT - Based on 15 workers per day, 4 concrete daily truck trips (modeled as vendor trips), and total haul trips based on 16 CY capacity dump truck. Default miles.

Construction Off-road Equipment Mitigation - Watering twice per day in accordance with BAAQMD BMPs. Diesel Tier 2 engines, Level 3 VDECS. Generator assumed to be electrical.

BCTD DB-128R2 - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	6.00	218.00
tblConstructionPhase	PhaseEndDate	4/10/2019	12/31/2019
tblConstructionPhase	PhaseStartDate	4/3/2019	3/1/2019
tblGrading	MaterialExported	0.00	9,711.00
tblGrading	MaterialImported	0.00	7,355.00

BCTD DB-128R2 - San Francisco County, Annual

tblLandUse	LotAcreage	0.00	2.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	20.00	30.00

2.0 Emissions Summary

BCTD DB-128R2 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815
Maximum	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.1841	4.3090	3.2455	6.6900e-003	0.0506	0.0201	0.0707	0.0136	0.0200	0.0336	0.0000	551.1153	551.1153	0.1344	0.0000	554.4759
Maximum	0.1841	4.3090	3.2455	6.6900e-003	0.0506	0.0201	0.0707	0.0136	0.0200	0.0336	0.0000	551.1153	551.1153	0.1344	0.0000	554.4759

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	51.08	-7.89	-5.26	0.00	2.68	88.85	69.59	1.52	88.24	81.72	0.00	10.05	10.05	2.82	0.00	10.01

BCTD DB-128R2 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2019	5-31-2019	1.3151	1.3521
2	6-1-2019	8-31-2019	1.3134	1.3504
3	9-1-2019	9-30-2019	0.4283	0.4403
		Highest	1.3151	1.3521

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-128R2 - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Grading	3/1/2019	12/31/2019	5	218	

**Acres of Grading (Site Preparation Phase): 0**

BCTD DB-128R2 - San Francisco County, Annual

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	1	8.00	158	0.38
Trenching	Other Construction Equipment	2	8.00	172	0.42
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Off-Highway Trucks	1	8.00	402	0.38
Trenching	Rollers	1	8.00	80	0.38
Trenching	Rubber Tired Dozers	0	0.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Graders	0	0.00	187	0.41

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	8	30.00	8.00	2,133.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

BCTD DB-128R2 - San Francisco County, Annual

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Use DPF for Construction Equipment
- Water Exposed Area

**3.2 Trenching - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Fugitive Dust					2.5200e-003	0.0000	2.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3518	3.4656	2.8553	5.2500e-003	0.1780	0.1780	0.1780	0.1678	0.1678	0.1678	0.0000	466.2056	466.2056	0.1175	0.0000	469.1430
<b>Total</b>	<b>0.3518</b>	<b>3.4656</b>	<b>2.8553</b>	<b>5.2500e-003</b>	<b>2.5200e-003</b>	<b>0.1780</b>	<b>0.1806</b>	<b>3.8000e-004</b>	<b>0.1678</b>	<b>0.1681</b>	<b>0.0000</b>	<b>466.2056</b>	<b>466.2056</b>	<b>0.1175</b>	<b>0.0000</b>	<b>469.1430</b>

BCTD DB-128R2 - San Francisco County, Annual

**3.2 Trenching - 2019**  
**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1597	3.7806	3.0175	5.2500e-003	0.0177	0.0177	0.0177	0.0177	0.0177	0.0177	0.0000	404.5975	404.5975	0.1136	0.0000	407.4373
<b>Total</b>	<b>0.1597</b>	<b>3.7806</b>	<b>3.0175</b>	<b>5.2500e-003</b>	<b>1.1300e-003</b>	<b>0.0177</b>	<b>0.0188</b>	<b>1.7000e-004</b>	<b>0.0177</b>	<b>0.0178</b>	<b>0.0000</b>	<b>404.5975</b>	<b>404.5975</b>	<b>0.1136</b>	<b>0.0000</b>	<b>407.4373</b>

BCTD DB-128R2 - San Francisco County, Annual

**3.2 Trenching - 2019**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

BCTD DB-128R2 - San Francisco County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	H-W or C-C	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	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.607015	0.041018	0.191033	0.087570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460

5.0 Energy Detail

Historical Energy Use: N





### 5.3 Energy by Land Use - Electricity

#### Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Category	tons/yr																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

BCTD DB-128R2 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**Mitigated**

SubCategory	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**7.2 Water by Land Use**

**Mitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**Category/Year**

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-128R2 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

BCTD DB-128R2 - San Francisco County, Annual

**BCTD DB-128R2**  
**San Francisco County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	2.50	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	4.6	<b>Precipitation Freq (Days)</b>	64
<b>Climate Zone</b>	5			<b>Operational Year</b>	2020

**Utility Company** Pacific Gas & Electric Company

<b>CO2 Intensity (lb/MW/hr)</b>	641.35	<b>CH4 Intensity (lb/MW/hr)</b>	0.029	<b>N2O Intensity (lb/MW/hr)</b>	0.006
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**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Project acreage based on trenching limits from Construction Length and Phasing Map, assuming 15 ft width.

Construction Phase - Project specific construction schedule.

Off-road Equipment - Project specific equipment. Off highway truck to account for asphalt truck. Other construction equipment to account for jackhammer.

Grading - Based on material excavation (expanded): 9,711 CY; material backfill: 7,355 CY.

Trips and VMT - Based on 15 workers per day, 4 concrete daily truck trips (modeled as vendor trips), and total haul trips based on 16 CY capacity dump truck. Default miles.

Construction Off-road Equipment Mitigation - Watering twice per day in accordance with BAAQMD BMPs. Diesel Tier 4 Final Engines. Generator assumed to be electrical.

BCTD DB-128R2 - San Francisco County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	6.00	218.00
tblConstructionPhase	PhaseEndDate	4/10/2019	12/31/2019
tblConstructionPhase	PhaseStartDate	4/3/2019	3/1/2019
tblGrading	MaterialExported	0.00	9,711.00
tblGrading	MaterialImported	0.00	7,355.00
tblLandUse	LotAcreage	0.00	2.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38

BCTD DB-128R2 - San Francisco County, Annual

tbIOffRoadEquipment	OffRoadEquipmentType	Excavators	
tbIOffRoadEquipment	OffRoadEquipmentType	Other Construction Equipment	
tbIOffRoadEquipment	OffRoadEquipmentType	Concrete/Industrial Saws	
tbIOffRoadEquipment	OffRoadEquipmentType	Generator Sets	
tbIOffRoadEquipment	OffRoadEquipmentType	Skid Steer Loaders	
tbIOffRoadEquipment	OffRoadEquipmentType	Off-Highway Trucks	
tbIOffRoadEquipment	OffRoadEquipmentType	Rollers	
tbIOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00
tbIOffRoadEquipment	OffRoadEquipmentUnitAmount		2.00
tbIOffRoadEquipment	OffRoadEquipmentUnitAmount		1.00
tbIOffRoadEquipment	UsageHours		8.00
tbIOffRoadEquipment	UsageHours		7.00
tbIOffRoadEquipment	UsageHours		8.00
tbITripsAndVMT	VendorTripNumber		0.00
tbITripsAndVMT	WorkerTripNumber		20.00
			0.00
			0.00
			0.00
			8.00
			30.00

2.0 Emissions Summary

BCTD DB-128R2 - San Francisco County, Annual

**2.1 Overall Construction**  
**Unmitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815
Maximum	0.3763	3.9939	3.0834	6.6900e-003	0.0520	0.1805	0.2324	0.0138	0.1701	0.1839	0.0000	612.7234	612.7234	0.1383	0.0000	616.1815

**Mitigated Construction**

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2019	0.0814	0.8774	3.1275	6.6900e-003	0.0506	9.6900e-003	0.0603	0.0136	9.5700e-003	0.0232	0.0000	551.1153	551.1153	0.1344	0.0000	554.4759
Maximum	0.0814	0.8774	3.1275	6.6900e-003	0.0506	9.6900e-003	0.0603	0.0136	9.5700e-003	0.0232	0.0000	551.1153	551.1153	0.1344	0.0000	554.4759

Percent Reduction	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	78.37	78.03	-1.43	0.00	2.68	94.63	74.08	1.52	94.37	87.40	0.00	10.05	10.05	2.82	0.00	10.01

BCTD DB-128R2 - San Francisco County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2019	5-31-2019	1.3151	0.2868
2	6-1-2019	8-31-2019	1.3134	0.2850
3	9-1-2019	9-30-2019	0.4283	0.0929
		Highest	1.3151	0.2868

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-128R2 - San Francisco County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

Category	tons/yr											MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Area	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste																	
Water																	
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Grading	3/1/2019	12/31/2019	5	218	

**Acres of Grading (Site Preparation Phase): 0**

BCTD DB-128R2 - San Francisco County, Annual

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	1	8.00	158	0.38
Trenching	Other Construction Equipment	2	8.00	172	0.42
Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Trenching	Generator Sets	1	8.00	84	0.74
Trenching	Skid Steer Loaders	1	8.00	65	0.37
Trenching	Off-Highway Trucks	1	8.00	402	0.38
Trenching	Rollers	1	8.00	80	0.38
Trenching	Rubber Tired Dozers	0	0.00	247	0.40
Trenching	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Trenching	Graders	0	0.00	187	0.41

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	8	30.00	8.00	2,133.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

- Use Alternative Fuel for Construction Equipment
- Use Cleaner Engines for Construction Equipment
- Water Exposed Area

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**3.2 Trenching - 2019**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Fugitive Dust					2.5200e-003	0.0000	2.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3518	3.4656	2.8553	5.2500e-003		0.1780	0.1780	0.1678	0.1678	0.1678	0.0000	466.2056	466.2056	0.1175	0.0000	469.1430
<b>Total</b>	<b>0.3518</b>	<b>3.4656</b>	<b>2.8553</b>	<b>5.2500e-003</b>	<b>2.5200e-003</b>	<b>0.1780</b>	<b>0.1806</b>	<b>3.8000e-004</b>	<b>0.1678</b>	<b>0.1681</b>	<b>0.0000</b>	<b>466.2056</b>	<b>466.2056</b>	<b>0.1175</b>	<b>0.0000</b>	<b>469.1430</b>

**Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

BCTD DB-128R2 - San Francisco County, Annual

**3.2 Trenching - 2019**

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0570	0.3491	2.8994	5.2500e-003	7.2300e-003	7.2300e-003	7.2300e-003	7.2300e-003	0.0000	7.2300e-003	0.0000	404.5975	404.5975	0.1136	0.0000	407.4373
<b>Total</b>	<b>0.0570</b>	<b>0.3491</b>	<b>2.8994</b>	<b>5.2500e-003</b>	<b>1.1300e-003</b>	<b>7.2300e-003</b>	<b>8.3600e-003</b>	<b>1.7000e-004</b>	<b>7.2300e-003</b>	<b>7.4000e-003</b>	<b>0.0000</b>	<b>404.5975</b>	<b>404.5975</b>	<b>0.1136</b>	<b>0.0000</b>	<b>407.4373</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	9.7600e-003	0.4020	0.1122	9.2000e-004	0.0179	1.5200e-003	0.0194	4.9100e-003	1.4600e-003	6.3700e-003	0.0000	96.7670	96.7670	0.0169	0.0000	97.1904
Vendor	3.9400e-003	0.1190	0.0353	2.4000e-004	5.7000e-003	7.4000e-004	6.4400e-003	1.6500e-003	7.0000e-004	2.3500e-003	0.0000	24.3798	24.3798	3.2900e-003	0.0000	24.4620
Worker	0.0107	7.4100e-003	0.0806	2.8000e-004	0.0258	2.0000e-004	0.0260	6.8700e-003	1.8000e-004	7.0600e-003	0.0000	25.3710	25.3710	6.0000e-004	0.0000	25.3861
<b>Total</b>	<b>0.0244</b>	<b>0.5283</b>	<b>0.2281</b>	<b>1.4400e-003</b>	<b>0.0494</b>	<b>2.4600e-003</b>	<b>0.0519</b>	<b>0.0134</b>	<b>2.3400e-003</b>	<b>0.0158</b>	<b>0.0000</b>	<b>146.5179</b>	<b>146.5179</b>	<b>0.0208</b>	<b>0.0000</b>	<b>147.0386</b>

**4.0 Operational Detail - Mobile**

BCTD DB-128R2 - San Francisco County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**4.3 Trip Type Information**

Land Use	Miles				Trip %				Trip Purpose %				
	H-W or C-W	H-O or C-NW	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	H-O or C-NW	Primary	Diverted	Pass-by		
User Defined Industrial	9.50	7.30	7.30	7.30	0.00	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
User Defined Industrial	0.607015	0.041018	0.191033	0.097570	0.015386	0.004865	0.027149	0.008727	0.004280	0.004624	0.006947	0.000926	0.000460





**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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BCTD DB-128R2 - San Francisco County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Mitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
tons/yr																	
MT/yr																	
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

BCTD DB-128R2 - San Francisco County, Annual

**6.2 Area by SubCategory**

**Mitigated**

SubCategory	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Architectural Coating	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	0.0000	2.0000e-005
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

BCTD DB-128R2 - San Francisco County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 7.2 Water by Land Use

#### Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### Category/Year

Category/Year	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

BCTD DB-128R2 - San Francisco County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

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### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

Equipment Type	Number

## 11.0 Vegetation

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