Appendix C-2

Option 2: Air Quality and Greenhouse Gas Analysis
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MEMORANDUM

To: Mark Tersini, KT Urban
From: Ace Malisos
      Noemi Wyss
      Kimley-Horn and Associates, Inc.
Date: July 2, 2019
Subject: Garden Gate Tower Project – Option 2 Air Quality and Greenhouse Gas Emissions Analysis

1.0 Purpose

The purpose of this memorandum is to identify the air quality and greenhouse gas (GHG) emissions associated with construction and operations of the proposed Garden Gate Tower Project (Project), located in the City of San José, California. The Project was originally proposed as a multi-family project, but in March 2019 the City Council amended the City’s Zoning ordinance to establish a Co-Living Community as an allowed residential use within two Downtown Zoning Districts. As discussed in section 2.0 Project Description below, the Applicant added a Co-Living as Option 2.

2.0 Proposed Project Description

The Project is located approximately 0.8 miles south of Downtown San José (City) in Santa Clara County, California. The site is located in an urban area bounded by residential uses in a mix of single-family and multi-family. Interstate 280 runs south of the project site, South 1st Street to the west, East Reed Street to the North and an Alley to the east. The project site is near Valley Transportation Authority (VTA) bus stop for routes 66, 68, and 82. The proposed Project site includes two parcels (Assessor Parcel Number 472-26-090 and 472-26-089) on approximately 0.42 acres. The Project site includes an existing commercial building, two-story residential structure, and associated landscaping and parking.

The Project includes a residential tower with ground-floor neighborhood-oriented retail in a 27-story tower. The tower would have a maximum height of 283 feet.

Option 1 (previously studied) includes the traditional multi-family project with 290 units and 4,840 square-feet (sf) of retail divided into four spaces. Option 1 would provide 232 vehicle parking spaces and 74 bicycle parking spaces. Option 1 would have a density of 690 dwelling units per acre.
Option 2 of the proposed Project is the Co-Living configuration. Option 2 includes 850\(^1\) bedrooms, approximately 6,000 square-feet of ground-floor retail area, 124 vehicle parking spaces, and 180 bicycle parking spaces. The density would be approximately 1,445 dwelling units per acre.

Vehicular access to the project site would consist of a garage driveway up on the Alley accessed from East Reed Street and a garage entry down on South 1st Street. The Alley has a width of 24 feet and therefore would limit the types of vehicles able to enter the garage.

Air Quality/ Greenhouse Gas Assessment and a Health Risk Assessment were originally prepared by Michael Baker International in January 2018 for the original Option 1 Project. The analysis below addresses Option 2.

3.0 Project Specific Analysis

3.1 Air Quality

Construction Emissions

Construction for Option 1 and Option 2 would involve the same building footprint and nearly the same exterior building architecture with the exception of some minor differences in the ground floor layout. The construction for Option 2 was not separately modeled as it was assumed to have the same demolition, earthwork volumes, construction phasing and equipment use. The project involves construction activities associated with demolition of the paved area, site preparation, grading, construction, and architectural coating applications. Site grading would require approximately 31,500 cubic yards of soil export. The project would be constructed over approximately 26 months. It is assumed that operations of the Project would begin in Summer 2022. The project would be required to implement BAAQMD standard dust control rules.

Operational Emissions

Operational impacts are related to area source emissions and mobile source emissions. Area sources include natural gas for space and water heating, gasoline-powered landscaping and maintenance equipment, consumer products (such as household cleaners). Mobile sources emission are generated from vehicle operations associated with the operation of the proposed Project. Typically, area sources are small sources that contribute very little emissions individually, but when combined may generate substantial amounts of pollutants. Area specific defaults in the CalEEMod were used to calculate area source emissions. Area specific defaults in the CalEEMod were used to calculate area source emissions. Area specific defaults in the CalEEMod were used to calculate area source emissions.

\(^1\) Consistent with other co-living projects, the City of San José assumes 1.5 people per bedroom to calculate the anticipated number of residents. That value (1,275 residents) is divided by the average number of people per household in the Downtown, which is 2.1 (per Census data) to calculate the number of units towards the capacity of the Downtown Strategy 2040 FEIR. This would result in 607 units equivalent for this project.
emissions. CalEEMod estimated emissions from the operation of the proposed Project are shown in Table 1: Operational Emissions.

Table 1: Operational Emissions (lbs/day)

<table>
<thead>
<tr>
<th>Source</th>
<th>Reactive Organic Gases (ROG)</th>
<th>Nitrogen Oxide (NOx)</th>
<th>Coarse Particulate Matter (PM10)</th>
<th>Fine Particulate Matter (PM2.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Source Emissions</td>
<td>14.45</td>
<td>4.34</td>
<td>0.58</td>
<td>0.58</td>
</tr>
<tr>
<td>Energy Source Emissions</td>
<td>0.14</td>
<td>1.16</td>
<td>0.09</td>
<td>0.09</td>
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<tr>
<td>Mobile Source Emissions</td>
<td>4.30</td>
<td>14.45</td>
<td>9.57</td>
<td>2.63</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>21.88</td>
<td>19.95</td>
<td>10.25</td>
<td>3.30</td>
</tr>
<tr>
<td>BAAQMD Significance Thresholds</td>
<td>54</td>
<td>54</td>
<td>82</td>
<td>54</td>
</tr>
</tbody>
</table>

Exceed thresholds? No No No No

Notes:
1. Based on CalEEMod modeling results, worst-case seasonal emissions for area, energy, and mobile emissions have been modeled. Refer to Attachment A (Option 2 Air Quality/GHG Emissions Data) for assumptions used in this analysis.
2. Total project mitigated emissions include use of natural gas hearths only per BAAQMD Regulation 6, Rule 3 (Wood-Burning Devices) and a 20 percent exceedance of Title 24 energy efficiency standards.

CalEEMod was used to calculate average daily emissions for both area source, energy source, and mobile source emissions. As shown in Table 1, the Project-related emissions would not exceed the BAAQMD’s established thresholds. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the traffic data within Traffic Operations Analysis, as provided in Appendix H. As noted in the Garden Gate Tower Traffic Analysis, Option 2 would generate approximately 1,412 vehicle trips. As shown in Table 1, the net increase in emissions generated by vehicle traffic associated with the project would not exceed established BAAQMD regional thresholds.

Area Source Emissions would be generated due to consumer products, architectural coating, and landscaping that were previously not present on the site. Energy source emissions would be generated due to the Project’s electricity and natural gas usage. The Project’s primary uses of electricity and natural gas would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 1, area source and energy source emissions from the project would not exceed BAAQMD thresholds for ROG, NOx, PM10, or PM2.5.

Conclusion

The Project would involve the same building footprint and nearly the same exterior building architecture as the original Option 1 of the project. The construction for Option 2 was not separately modeled as it was assumed to have the same demolition, earthwork volumes, construction phasing
and equipment use. Therefore, construction was assumed to be similar. The proposed Project would not result in new impacts relative to cumulative air quality emissions or a substantial increase in the severity of a previously identified significant impact. As shown in Table 1, the Project would not exceed BAAQMD’s threshold. Therefore, no new or more significant operational air quality impacts than those analyzed in the Downtown Strategy 2040 FEIR would occur and no new or additional mitigation is required.

3.2 Greenhouse Gas Emissions

Construction Emissions

Construction for Option 1 and Option 2 would involve the same building footprint and nearly the same exterior building architecture with the exception of some minor differences in the ground floor layout. The construction for Option 2 was not separately modeled as it was assumed to have the same demolition, earthwork volumes, construction phasing, and equipment use. The proposed Project would result in 56.79 MTCO$_2$eq/year (amortized over 30 years), which represents a total of approximately 1,822.47 MTCO$_2$eq from construction activities.

Operational Emissions

Option 1 and 2 of the project would generate GHG emissions from direct and indirect sources. Direct emissions include construction, area source, and mobile emissions while indirect are energy consumption, solid waste, and water demand. The project would result in emissions of CO$_2$, N$_2$O, and CH$_4$, and would not result in other GHGs that would facilitate a meaningful analysis. Table 2, Operational Greenhouse Gas Emissions, shows the direct and indirect project-related sources. As shown in Table 2, the total project-related emissions for Option 2 would result in 3,162.82 MTCO$_2$eq/year. The project’s service population is estimated to be approximately 1,275 (residential) which would result in 2.48 MTCO$_2$eq per service population per year. This is below BAAQMD significance threshold. Therefore Option 2’s contribution of GHG emissions would be less than significant.

Conclusion

As proposed, Option 1 and Option 2 include construction of a mixed use residential building. The two existing buildings onsite would be demolished. Both options would involve the same building footprint and nearly the same exterior building architecture with the exception of some minor differences in the ground floor layout. Under Option 2, direct project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation.

The project would be LEED certified as required by City Council policy and would achieve LEED NC v4 Certification through the USGBC. Both options will also incorporate bicycle and pedestrian facilities.
and connections into the project as part of the design review and Building Permit process, consistent with City standards and requirements. The Project includes a TDM program to result in a 42 percent reduction in parking. This would include either a car-share or transit pass program, as well as many other potential measures. Therefore, no new or more significant impacts than those analyzed in the Envision 2040 General Plan Final and Supplemental EIRs would occur and no new or additional mitigation is required.

Table 2: Operational Greenhouse Gas Emissions (lbs/day)

<table>
<thead>
<tr>
<th>Source</th>
<th>CO2 MT/yr</th>
<th>CH4 MT/yr</th>
<th>N2O MT/yr</th>
<th>MTO2eq</th>
<th>Total MTO2eq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction (total 1,822.47 MTO2eq amortized 20 years)</td>
<td>56.58</td>
<td>0.01</td>
<td>0.20</td>
<td>0.0</td>
<td>56.79</td>
</tr>
<tr>
<td>Area Source Emissions</td>
<td>31.61</td>
<td>0.01</td>
<td>0.19</td>
<td>0.0004</td>
<td>31.94</td>
</tr>
<tr>
<td>Energy Source Emissions</td>
<td>979.86</td>
<td>0.04</td>
<td>1.00</td>
<td>0.01</td>
<td>984.20</td>
</tr>
<tr>
<td>Mobile Source Emissions</td>
<td>1,801.12</td>
<td>0.07</td>
<td>1.75</td>
<td>0.0</td>
<td>1,802.90</td>
</tr>
<tr>
<td>Solid Waste Emissions</td>
<td>57.96</td>
<td>3.43</td>
<td>85.75</td>
<td>0.0</td>
<td>143.59</td>
</tr>
<tr>
<td>Water Demand</td>
<td>101.31</td>
<td>1.31</td>
<td>32.75</td>
<td>0.03</td>
<td>143.40</td>
</tr>
<tr>
<td><strong>Total Emissions</strong></td>
<td><strong>3,028.44</strong></td>
<td><strong>4.87</strong></td>
<td><strong>121.64</strong></td>
<td><strong>0.0404</strong></td>
<td><strong>3,162.82</strong></td>
</tr>
</tbody>
</table>

Total Service Population Emissions45: 2.48 MTO2eq/ SP

BAAQMD Significance Thresholds: 4.6 MTO2eq/ SP

Exceed thresholds? No

Notes:
1. Emissions calculated using CalEEMod 2016.3.2. Emissions incorporate reductions from design features such as the downtown infill locations, increase in density, and increase in diversity as the project involves a mixed-use project with 290 dwelling units on an approximately 0.5-acre site in Downtown San Jose.
3. Totals may be slightly off due to rounding.
4. Service population emissions are based on a service population of 1,275 based on the Project Description (850 bedrooms with 1.5 people per bedroom = 1,275 people).
5. The project’s total service population emissions were calculated by dividing the total proposed project-related emissions (3,162.82 MTO2eq/yr) by the service population (1,275); therefore, 3,162.82/1,275 = 2.48

Source: CalEEMod version 2016.3.2. Refer to Attachment A (Option 2 Air Quality/GHG Emissions Data) for model outputs.
Attachment A
Option 2 Air Quality/GHG Emissions Data
1.0 Project Characteristics

1.1 Land Usage

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Size</th>
<th>Metric</th>
<th>Lot Acreage</th>
<th>Floor Surface Area</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosed Parking with Elevator</td>
<td>124.00</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>607.00</td>
<td>Dwelling Unit</td>
<td>0.40</td>
<td>607,000.00</td>
<td>1275</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>6.00</td>
<td>1000sqft</td>
<td>0.14</td>
<td>6,000.00</td>
<td>0</td>
</tr>
</tbody>
</table>

1.2 Other Project Characteristics

- Urbanization: Urban
- Wind Speed (m/s): 2.2
- Precipitation Freq (Days): 58
- Climate Zone: 4
- Operational Year: 2020
- Utility Company: Pacific Gas & Electric Company
- CO2 Intensity (lb/MWhr): 641.35
- CH4 Intensity (lb/MWhr): 0.029
- N2O Intensity (lb/MWhr): 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

- Land Use - 850 bedrooms with 1.5 people per bedroom = 1,275 people. Divided by 2.1 persons per household = 607 DU
- Construction Phase - Operational Only run
- Off-road Equipment - Operational only
- Vehicle Trips - Per TIA
- Woodstoves -
- Mobile Land Use Mitigation - Project density is 607 DU per 0.5 acre, downtown infill with mix of uses
Area Mitigation -
Energy Mitigation -
Water Mitigation -
Waste Mitigation - Per AB939

### Table Name: tblConstructionPhase
- Column Name: NumDays
  - Default Value: 10.00
  - New Value: 0.00

### Table Name: tblLandUse
- Column Name: LotAcreage
  - Default Value: 9.79
  - New Value: 0.40

### Table Name: tblLandUse
- Column Name: Population
  - Default Value: 1,736.00
  - New Value: 1,275.10

### Table Name: tblOffRoadEquipment
- Column Name: OffRoadEquipmentUnitAmount
  - Default Value: 1.00
  - New Value: 0.00

### Table Name: tblTripsAndVMT
- Column Name: WorkerTripNumber
  - Default Value: 8.00
  - New Value: 0.00

### Table Name: tblVehicleTrips
- Column Name: ST_TR
  - Default Value: 4.98
  - New Value: 4.45
- Column Name: SU_TR
  - Default Value: 3.65
  - New Value: 4.45
- Column Name: WD_TR
  - Default Value: 4.20
  - New Value: 4.45

### Table Name: tblTripsAndVMT
- Column Name: WorkerTripNumber
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  - New Value: 0.00

### Table Name: tblVehicleTrips
- Column Name: ST_TR
  - Default Value: 42.04
  - New Value: 9.74
- Column Name: SU_TR
  - Default Value: 20.43
  - New Value: 9.74
- Column Name: WD_TR
  - Default Value: 44.32
  - New Value: 9.74

### 2.0 Emissions Summary

<table>
<thead>
<tr>
<th></th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Reduction</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### 2.2 Overall Operational

#### Unmitigated Operational

<table>
<thead>
<tr>
<th></th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>lb/day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3.0 Construction Detail

#### Construction Phase

<table>
<thead>
<tr>
<th>Phase Number</th>
<th>Phase Name</th>
<th>Phase Type</th>
<th>Start Date</th>
<th>End Date</th>
<th>Num Days</th>
<th>Num Days</th>
<th>Phase Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demolition</td>
<td>Demolition</td>
<td>1/1/2020</td>
<td>12/31/2019</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

#### 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

### OffRoad Equipment

<table>
<thead>
<tr>
<th>Phase Name</th>
<th>Offroad Equipment Type</th>
<th>Amount</th>
<th>Usage Hours</th>
<th>Horse Power</th>
<th>Load Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>Concrete/Industrial Saws</td>
<td>0</td>
<td>8.00</td>
<td>81</td>
<td>0.73</td>
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<tr>
<td>Demolition</td>
<td>Rubber Tired Dozers</td>
<td>1</td>
<td>1.00</td>
<td>247</td>
<td>0.40</td>
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<tr>
<td>Demolition</td>
<td>Tractors/Loaders/Backhoes</td>
<td>2</td>
<td>0.00</td>
<td>97</td>
<td>0.37</td>
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</table>

### Trips and VMT

<table>
<thead>
<tr>
<th>Phase Name</th>
<th>Offroad Equipment Type</th>
<th>Worker Trip Count</th>
<th>Worker Trip Number</th>
<th>Vendor Trip Number</th>
<th>Hauling Trip Number</th>
<th>Worker Trip Length</th>
<th>Vendor Trip Length</th>
<th>Hauling Trip Length</th>
<th>Worker Vehicle Class</th>
<th>Vendor Vehicle Class</th>
<th>Hauling Vehicle Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td></td>
<td>3</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>10.80</td>
<td>7.30</td>
<td>20.00</td>
<td>LD_Mix</td>
<td>HDT_Mix</td>
<td>HHD_Mix</td>
</tr>
</tbody>
</table>

#### 3.1 Mitigation Measures Construction

#### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

Increase Density
Increase Diversity
### 4.2 Trip Summary Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Daily Trip Rate</th>
<th>Unmitigated</th>
<th>Mitigated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weekday</td>
<td>Saturday</td>
<td>Sunday</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>2,701.15</td>
<td>2,701.15</td>
<td>2,701.15</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>58.44</td>
<td>58.44</td>
<td>58.44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,759.59</td>
<td>2,759.59</td>
<td>2,759.59</td>
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### 4.3 Trip Type Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H-W or C-W</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>10.80</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>9.50</td>
</tr>
</tbody>
</table>

### 4.4 Fleet Mix

<table>
<thead>
<tr>
<th>Land Use</th>
<th>LDA</th>
<th>LDT1</th>
<th>LDT2</th>
<th>MDV</th>
<th>LHD1</th>
<th>LHD2</th>
<th>MHD</th>
<th>HHD</th>
<th>OBUS</th>
<th>UBUS</th>
<th>MCY</th>
<th>SBUS</th>
<th>MH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments High Rise</td>
<td>0.604810</td>
<td>0.038204</td>
<td>0.185149</td>
<td>0.108513</td>
<td>0.015498</td>
<td>0.004981</td>
<td>0.012268</td>
<td>0.020156</td>
<td>0.0002083</td>
<td>0.0001571</td>
<td>0.0005363</td>
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<tr>
<td>Enclosed Parking with Elevator</td>
<td>0.604810</td>
<td>0.038204</td>
<td>0.185149</td>
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<td>Strip Mall</td>
<td>0.604810</td>
<td>0.038204</td>
<td>0.185149</td>
<td>0.108513</td>
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<td>0.0001571</td>
<td>0.0005363</td>
<td>0.000620</td>
<td>0.000785</td>
</tr>
</tbody>
</table>

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24
### 5.2 Energy by Land Use - Natural Gas

#### Unmitigated

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Mitigated</td>
<td>0.1356</td>
<td>1.1590</td>
<td>0.4945</td>
<td>7.4000e-003</td>
<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>1.479.358</td>
<td>0.0284</td>
<td>0.0271</td>
<td>1,488.149</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Natural Gas Unmitigated</td>
<td>0.1504</td>
<td>1.3279</td>
<td>0.5866</td>
<td>5.4700e-003</td>
<td>0.1073</td>
<td>0.1073</td>
<td>0.1073</td>
<td>0.1073</td>
<td>1,694.880</td>
<td>0.0325</td>
<td>0.0311</td>
<td>1,704.562</td>
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</tbody>
</table>

#### Mitigated

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
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<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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<tbody>
<tr>
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<td>0.0325</td>
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<td>1,704.562</td>
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### Category Breakdown

- **Apartments High Rise**: 14,367.5
- **Enclosed Parking with Elevator**: 0
- **Strip Mall**: 38,958.9

**Total**

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<th>Exhaust PM10</th>
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<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
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<th>Total CO2</th>
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</tr>
</thead>
<tbody>
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<td>0.4945</td>
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<td>0.0937</td>
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<td>0.0937</td>
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<td>0.0284</td>
<td>0.0271</td>
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<td></td>
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<td>0.5866</td>
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<td>0.0311</td>
<td>1,704.562</td>
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**Total**

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<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
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<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
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<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Mitigated</td>
<td>0.1356</td>
<td>1.1590</td>
<td>0.4945</td>
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<td>0.0937</td>
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<td>0.0271</td>
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<td></td>
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<td>0.0311</td>
<td>1,704.562</td>
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### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use only Natural Gas Hearths

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
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<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigated</td>
<td>17.4478</td>
<td>4.3404</td>
<td>51.1577</td>
<td>0.0266</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.0000</td>
<td>4,889.0703</td>
<td>3</td>
<td>4,889.0703</td>
<td>0.1800</td>
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<tr>
<td>Unmitigated</td>
<td>266.6428</td>
<td>6.1000</td>
<td>380.0751</td>
<td>0.8381</td>
<td>47.0987</td>
<td>47.0987</td>
<td>47.0987</td>
<td>47.0987</td>
<td>47.0987</td>
<td>47.0987</td>
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<td>2,339.6703</td>
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<td>7,703.8303</td>
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#### 6.2 Area by SubCategory

**Unmitigated**

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<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Coating</td>
<td>2.3585</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
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<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
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</table>
### 7.0 Water Detail

#### 7.1 Mitigation Measures Water

#### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### 9.0 Operational Offroad
## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Hours/Day</th>
<th>Hours/Year</th>
<th>Horse Power</th>
<th>Load Factor</th>
<th>Fuel Type</th>
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</thead>
</table>

### Boilers

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Heat Input/Day</th>
<th>Heat Input/Year</th>
<th>Boiler Rating</th>
<th>Fuel Type</th>
</tr>
</thead>
</table>

### User Defined Equipment

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
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## 11.0 Vegetation
1.0 Project Characteristics

1.1 Land Usage

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Size</th>
<th>Metric</th>
<th>Lot Acreage</th>
<th>Floor Surface Area</th>
<th>Population</th>
</tr>
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<tbody>
<tr>
<td>Enclosed Parking with Elevator</td>
<td>124.00</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>607.00</td>
<td>Dwelling Unit</td>
<td>0.40</td>
<td>607,000.00</td>
<td>1275</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>6.00</td>
<td>1000sqft</td>
<td>0.14</td>
<td>6,000.00</td>
<td>0</td>
</tr>
</tbody>
</table>

1.2 Other Project Characteristics

- Urbanization: Urban
- Wind Speed (m/s): 2.2
- Climate Zone: 4
- Precipitation Freq (Days): 58
- Operational Year: 2020
- Utility Company: Pacific Gas & Electric Company

Carbon Intensities:
- CO2 Intensity (lb/MWhr): 641.35
- CH4 Intensity (lb/MWhr): 0.029
- N2O Intensity (lb/MWhr): 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics:
- Land Use: 850 bedrooms with 1.5 people per bedroom = 1,275 people. Divided by 2.1 persons per household = 607 DU
- Construction Phase: Operational Only run
- Off-road Equipment: Operational only
- Vehicle Trips: Per TIA
- Woodstoves: -
- Mobile Land Use Mitigation: Project density is 607 DU per 0.5 acre, downtown infill with mix of uses
2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational
### Mitigated Operational

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>17.4478</td>
<td>4.5404</td>
<td>51.8577</td>
<td>0.0266</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.5803</td>
<td>0.0000</td>
<td>4,689,070</td>
<td>3</td>
<td>4,689,070</td>
<td>0.1800</td>
<td>0.0880</td>
<td>4,919,767</td>
</tr>
<tr>
<td>Energy</td>
<td>0.1386</td>
<td>1.1590</td>
<td>0.4945</td>
<td>7.4000-003</td>
<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>1,479,358</td>
<td>6</td>
<td>1,479,358</td>
<td>0.0284</td>
<td>0.0271</td>
<td>1,497,149</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>3.6991</td>
<td>14.4536</td>
<td>39.8699</td>
<td>0.1089</td>
<td>9.4637</td>
<td>0.1113</td>
<td>9.5750</td>
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<td>2.6306</td>
<td>10,773.38</td>
<td>57</td>
<td>10,773.38</td>
<td>0.4437</td>
<td>0.1821</td>
<td>10,804.17</td>
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<td>Total</td>
<td>21.2825</td>
<td>19.9529</td>
<td>92.2220</td>
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<td>10.2490</td>
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### 3.0 Construction Detail

#### Construction Phase

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<tr>
<th>Phase Number</th>
<th>Phase Name</th>
<th>Phase Type</th>
<th>Start Date</th>
<th>End Date</th>
<th>Num Days Week</th>
<th>Num Days</th>
<th>Phase Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Demolition</td>
<td>Demolition</td>
<td>1/1/2020</td>
<td>12/31/2019</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

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

### OffRoad Equipment

<table>
<thead>
<tr>
<th>Phase Name</th>
<th>Offroad Equipment Type</th>
<th>Amount</th>
<th>Usage Hours</th>
<th>Horse Power</th>
<th>Load Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition</td>
<td>Concrete/Industrial Saws</td>
<td>0</td>
<td>8.00</td>
<td>81</td>
<td>0.73</td>
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<td>Demolition</td>
<td>Rubber Tired Dozers</td>
<td>1</td>
<td>1.00</td>
<td>247</td>
<td>0.40</td>
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<td>Demolition</td>
<td>Tractors/Loaders/Backhoes</td>
<td>2</td>
<td>6.00</td>
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<td>0.37</td>
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### Trips and VMT

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<thead>
<tr>
<th>Phase Name</th>
<th>Offroad Equipment Type</th>
<th>Worker Trip Count</th>
<th>Worker Trip Number</th>
<th>Vendor Trip Number</th>
<th>Hauling Trip Number</th>
<th>Worker Trip Length</th>
<th>Vendor Trip Length</th>
<th>Hauling Trip Length</th>
<th>Worker Vehicle Class</th>
<th>Vendor Vehicle Class</th>
<th>Hauling Vehicle Class</th>
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<tbody>
<tr>
<td>Demolition</td>
<td></td>
<td>3</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>10.80</td>
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<td>20.00</td>
<td>LD_Mix</td>
<td>HD1_Mix</td>
<td>HHDT</td>
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</table>

### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

Increase Density
Increase Diversity
### 4.2 Trip Summary Information

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Daily Trip Rate</th>
<th>Unmitigated</th>
<th>Mitigated</th>
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<tbody>
<tr>
<td></td>
<td>Weekday</td>
<td>Saturday</td>
<td>Sunday</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>2,701.15</td>
<td>2,701.15</td>
<td>2,701.15</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>58.44</td>
<td>58.44</td>
<td>58.44</td>
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<tr>
<td>Total</td>
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<td>2,759.59</td>
<td>2,759.59</td>
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### 4.3 Trip Type Information

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<th>Land Use</th>
<th>Miles</th>
<th>Trip %</th>
<th>Trip Purpose %</th>
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<tr>
<td></td>
<td>H-W or C-W</td>
<td>H-S or C-C</td>
<td>H-O or C-NW</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>10.80</td>
<td>4.80</td>
<td>5.70</td>
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<tr>
<td>Strip Mall</td>
<td>9.50</td>
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### 4.4 Fleet Mix

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<tr>
<th>Land Use</th>
<th>LDA</th>
<th>LTD1</th>
<th>LTD2</th>
<th>MDV</th>
<th>LHD1</th>
<th>LHD2</th>
<th>MH</th>
<th>HD</th>
<th>OBUS</th>
<th>OBUS</th>
<th>MCY</th>
<th>SBUS</th>
<th>MH</th>
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</thead>
<tbody>
<tr>
<td>Apartments High Rise</td>
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<tr>
<td>Enclosed Parking with Elevator</td>
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<td>0.038204</td>
<td>0.185149</td>
<td>0.108513</td>
<td>0.015498</td>
<td>0.004981</td>
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<td></td>
</tr>
<tr>
<td>Strip Mall</td>
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<td>0.038204</td>
<td>0.185149</td>
<td>0.108513</td>
<td>0.015498</td>
<td>0.004981</td>
<td>0.012268</td>
<td>0.020156</td>
<td>0.002083</td>
<td>0.000620</td>
<td>0.000785</td>
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<td></td>
</tr>
</tbody>
</table>

### 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

Exceed Title 24
### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

<table>
<thead>
<tr>
<th>Category</th>
<th>ROG</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
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<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaturalGas Mitigated</td>
<td>0.1356</td>
<td>1.1590</td>
<td>0.4945</td>
<td>7.4000e-003</td>
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<td>0.0937</td>
<td>0.0937</td>
<td>0.0937</td>
<td>1.479.358</td>
<td>0.0284</td>
<td>0.0271</td>
<td>1,488.149</td>
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</tr>
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<td>0.5666</td>
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<td>0.1073</td>
<td>0.1073</td>
<td>0.1073</td>
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<td>0.0325</td>
<td>0.0311</td>
<td>1,704.952</td>
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#### Mitigated

<table>
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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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<tbody>
<tr>
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### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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<th>ROS</th>
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<th>Exhaust PM10</th>
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<th>PM2.5 Exhaust</th>
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<th>Total CO2</th>
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<th>CO2e</th>
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<tbody>
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<td>4.34</td>
<td>51.85</td>
<td>0.026</td>
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### 6.2 Area by SubCategory

**Unmitigated**

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>PM2.5 Exhaust</th>
<th>Fugitive PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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### Mitigated

<table>
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<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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<td>0.0000</td>
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<td>0.0000</td>
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<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>3.7991</td>
<td>1.5996</td>
<td>0.0240</td>
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<tr>
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#### 7.0 Water Detail

#### 7.1 Mitigation Measures Water

#### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

#### 9.0 Operational Offroad
## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Hours/Day</th>
<th>Hours/Year</th>
<th>Horse Power</th>
<th>Load Factor</th>
<th>Fuel Type</th>
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</table>

### Boilers

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Heat Input/Day</th>
<th>Heat Input/Year</th>
<th>Boiler Rating</th>
<th>Fuel Type</th>
</tr>
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</table>

### User Defined Equipment

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
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## 11.0 Vegetation
### 1.0 Project Characteristics

#### 1.1 Land Usage

<table>
<thead>
<tr>
<th>Land Uses</th>
<th>Size</th>
<th>Metric</th>
<th>Lot Acreage</th>
<th>Floor Surface Area</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosed Parking with Elevator</td>
<td>124.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>607.00</td>
<td>Dwelling Unit</td>
<td>0.40</td>
<td>607,000.00</td>
<td>1275</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>6.00</td>
<td>1000 sqft</td>
<td>0.14</td>
<td>6,000.00</td>
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</tbody>
</table>

#### 1.2 Other Project Characteristics

- **Urbanization**: Urban
- **Wind Speed (m/s)**: 2.2
- **Precipitation Freq (Days)**: 58
- **Climate Zone**: 4
- **Operational Year**: 2020
- **Utility Company**: Pacific Gas & Electric Company
- **CO2 Intensity (lb/MWhr)**: 641.35
- **CH4 Intensity (lb/MWhr)**: 0.029
- **N2O Intensity (lb/MWhr)**: 0.006

#### 1.3 User Entered Comments & Non-Default Data

- **Project Characteristics** -
  Land Use - 850 bedrooms with 1.5 people per bedroom = 1,275 people. Divided by 2.1 persons per household = 607 DU
  Construction Phase - Operational Only run
  Off-road Equipment - Operational only
  Vehicle Trips - Per TIA
  Woodstoves -
  Mobile Land Use Mitigation - Project density is 607 DU per 0.5 acre, downtown infill with mix of uses
  Area Mitigation -
  Energy Mitigation -
### Water Mitigation -

### Waste Mitigation - Per AB939

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Column Name</th>
<th>Default Value</th>
<th>New Value</th>
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<tr>
<td>tblLandUse</td>
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<tr>
<td>tblLandUse</td>
<td>Population</td>
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<td>1,275.00</td>
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<tr>
<td>tblOffRoadEquipment</td>
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<td>tblTripsAndVMT</td>
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<tr>
<td>tblVehicleTrips</td>
<td>ST_TR</td>
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<td>4.45</td>
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<td>tblVehicleTrips</td>
<td>ST_TR</td>
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<td>SU_TR</td>
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#### 2.0 Emissions Summary

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<table>
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<tr>
<th>Percent Reduction</th>
<th>Quarter</th>
<th>Start Date</th>
<th>End Date</th>
<th>Maximum Unmitigated ROG + NOX (tons/quarter)</th>
<th>Maximum Mitigated ROG + NOX (tons/quarter)</th>
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<tbody>
<tr>
<td>0.00</td>
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#### 2.2 Overall Operational

**Unmitigated Operational**

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</table>
### Mitigated Operational

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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</thead>
<tbody>
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<td><strong>Total</strong></td>
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### Percent Reduction

<table>
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<tr>
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<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio-CO2</th>
<th>NBio-CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.70</td>
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<td>81.91</td>
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### 3.0 Construction Detail

**Construction Phase**
<table>
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<th>Phase Number</th>
<th>Phase Name</th>
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<th>End Date</th>
<th>Num Days Week</th>
<th>Num Days</th>
<th>Phase Description</th>
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<tr>
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<td>12/31/2019</td>
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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

### OffRoad Equipment

<table>
<thead>
<tr>
<th>Phase Name</th>
<th>Offroad Equipment Type</th>
<th>Amount</th>
<th>Usage Hours</th>
<th>Horse Power</th>
<th>Load Factor</th>
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<tbody>
<tr>
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<td>Concrete/Industrial Saws</td>
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<td>Demolition</td>
<td>Tractors/Loaders/Backhoes</td>
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<td>0.37</td>
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### Trips and VMT

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<th>Hauling Trip Number</th>
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<th>Vendor Trip Length</th>
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<th>Vendor Vehicle Class</th>
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<td>HDT_Mix</td>
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### 3.1 Mitigation Measures Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

Increase Density
Increase Diversity
### 4.2 Trip Summary Information

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<td>Sunday</td>
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<th>H-W or C-W</th>
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<th>H-O or C-NW</th>
<th>H-W or C-W</th>
<th>H-S or C-C</th>
<th>H-O or C-NW</th>
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<th>LDT2</th>
<th>MDV</th>
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<th>LHD2</th>
<th>MHD</th>
<th>HHD</th>
<th>OBUS</th>
<th>UBUS</th>
<th>MCY</th>
<th>SBUS</th>
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<td>0.185149</td>
<td>0.108513</td>
<td>0.0013498</td>
<td>0.0012268</td>
<td>0.0020156</td>
<td>0.0002083</td>
<td>0.001571</td>
<td>0.0005363</td>
<td>0.0005363</td>
<td>0.000620</td>
<td>0.000785</td>
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<tr>
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<td>0.038204</td>
<td>0.185149</td>
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<td>0.0013498</td>
<td>0.0012268</td>
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<td>0.0002083</td>
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<td>0.000785</td>
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<tr>
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<td>0.038204</td>
<td>0.185149</td>
<td>0.108513</td>
<td>0.0013498</td>
<td>0.0012268</td>
<td>0.0020156</td>
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<td>0.0005363</td>
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<td>0.000785</td>
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### 5.0 Energy Detail
### 5.1 Mitigation Measures Energy

#### Exceed Title 24

| 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 |
|------------------------|-----|-----|-----|-----|---------------|--------------|------------|---------------|---------------|------------|-----------|----------|-----------|-----------|------|-----|------|
| **Electricity**        |     |     |     |     |               |              |            |               |               |            |           |          |           |          |      |     |      |
| Mitigated              | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 734.9393 | 734.9393 | 0.0332 | 6.8800e-003 |
| Unmitigated            | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 747.6566 | 747.6566 | 0.0338 | 6.9900e-003 |
| **NaturalGas**         |     |     |     |     |               |              |            |               |               |            |           |          |           |          |      |     |      |
| Mitigated              | 0.0248 | 0.2115 | 0.0902 | 1.3500e-003 | 0.0171 | 0.0171 | 0.0171 | 0.0000 | 244.9244 | 244.9244 | 4.6900e-003 | 4.4900e-003 | 246.3799 |
| Unmitigated            | 0.0284 | 0.2423 | 0.1034 | 1.5500e-003 | 0.0196 | 0.0196 | 0.0196 | 0.0000 | 280.6064 | 280.6064 | 5.3800e-003 | 5.1400e-003 | 282.2740 |

### 5.2 Energy by Land Use - NaturalGas

#### Unmitigated

| Land Use                              | NaturalGas Use | ROG   | NOx  | CO   | SO2   | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4  | N2O | CO2e |
|---------------------------------------|----------------|-------|------|------|-------|---------------|--------------|------------|---------------|---------------|------------|-----------|----------|-----------|-----------|------|-----|------|
| **Apartments High Rise**              | 5.24415e+006   | 0.0283 | 0.2416 | 0.1028 | 1.5400e-003 | 0.0195 | 0.0195 | 0.0195 | 0.0000 | 279.8476 | 279.8476 | 5.3600e-003 | 5.1300e-003 | 281.5106 |
| **Enclosed Parking with Elevator**    | 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 |
| **Strip Mall**                        | 14220          | 8.0000e-005 | 7.0000e-004 | 5.9000e-004 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.7588 | 0.7588 | 1.0000e-005 | 1.0000e-005 | 0.7633 |
| **Total**                             | 0.0284         | 0.2423 | 0.1034 | 1.5400e-003 | 0.0196 | 0.0196 | 0.0196 | 0.0000 | 280.6064 | 280.6064 | 5.3700e-003 | 5.1400e-003 | 282.2739 |
### Mitigated

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<th>CO</th>
<th>SO2</th>
<th>Fugitive PM10</th>
<th>Exhaust PM10</th>
<th>PM10 Total</th>
<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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#### 5.3 Energy by Land Use - Electricity

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<th>CO2e</th>
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<td>N2O</td>
<td>CO2e</td>
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### 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use only Natural Gas Hearths

#### 6.2 Area by SubCategory

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<th>SO2</th>
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<th>Exhaust PM10</th>
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<th>Fugitive PM2.5</th>
<th>Exhaust PM2.5</th>
<th>PM2.5 Total</th>
<th>Bio- CO2</th>
<th>NBio- CO2</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
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**Mitigated**

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**7.0 Water Detail**

**7.1 Mitigation Measures Water**
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<td>1.3072</td>
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<td>143.4014</td>
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### 7.2 Water by Land Use

#### Unmitigated

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<th>Indoor/Outdoor Use</th>
<th>Total CO2</th>
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<tr>
<td>Total</td>
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<td>101.3053</td>
<td>1.3072</td>
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#### Mitigated
### Land Use Mgal to MT/yr

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<th>MT/yr</th>
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<th>CH4</th>
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### 8.0 Waste Detail

#### 8.1 Mitigation Measures Waste

**Category/Year**

<table>
<thead>
<tr>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigated</td>
<td>57.9580</td>
<td>3.4252</td>
<td>0.0000</td>
</tr>
<tr>
<td>Unmitigated</td>
<td>57.9580</td>
<td>3.4252</td>
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</tbody>
</table>

#### 8.2 Waste by Land Use

**Unmitigated**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Waste Disposed</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tons</td>
<td>M/yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartments High Rise</td>
<td>279.22</td>
<td>56.6791</td>
<td>3.3496</td>
<td>0.0000</td>
<td>140.4202</td>
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</tbody>
</table>
### Mitigated

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Waste Disposed</th>
<th>Total CO2</th>
<th>CH4</th>
<th>N2O</th>
<th>CO2e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments High Rise</td>
<td>279.22</td>
<td>36.6791</td>
<td>3.3496</td>
<td>0.0000</td>
<td>140.4202</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>6.3</td>
<td>1.2788</td>
<td>0.0756</td>
<td>0.0000</td>
<td>3.1683</td>
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<tr>
<td>Total</td>
<td></td>
<td>57.9580</td>
<td>3.4252</td>
<td>0.0000</td>
<td>143.5884</td>
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### 9.0 Operational Offroad

### 10.0 Stationary Equipment

#### Fire Pumps and Emergency Generators

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Hours/Day</th>
<th>Hours/Year</th>
<th>Horse Power</th>
<th>Load Factor</th>
<th>Fuel Type</th>
</tr>
</thead>
</table>

#### Boilers

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
<th>Heat Input/Day</th>
<th>Heat Input/Year</th>
<th>Boiler Rating</th>
<th>Fuel Type</th>
</tr>
</thead>
</table>

#### User Defined Equipment

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Number</th>
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</thead>
</table>