



## MEMORANDUM

**TO:** Mary Wright, AICP  
**FROM:** Mark Hagmann, P.E.  
**SUBJECT:** Air Quality and Greenhouse Gas Analysis in Support of an Addendum to the La Paz Ranch Revised Final Environmental Impact Report  
**DATE:** May 16, 2019

---

In 2016, Malibu Development Company LLC (“MDC”) acquired the property located at 23465 Civic Center Way in the City of Malibu (the “Property”). In 2008, the City of Malibu approved the La Paz project (the “Approved Project”) at the Property.<sup>1</sup> In the process of preparing to develop the Approved Project, MDC identified improvements to the Approved Project (the “Project Modifications”). This memorandum provides analysis of potential air quality and greenhouse gas impacts associated with the proposed modifications to the Approved Project.

### Project Description

#### Project Location

The Project Site is located in Malibu’s Civic Center Area, the principal commercial area in the City where the general public and residents visit. The Civic Center Area includes retail shops, restaurants, coffee shops, and other commercial uses. The Project Site is surrounded by a largely undeveloped hillside to the north-northwest, two single-family residences to the northeast, vacant land to the east (currently being developed with the Whole Foods in the Park project), Civic Center Way to the south, and the Los Angeles County–Malibu Civic Center property to the west (proposed to be developed with the Santa Monica College Malibu Campus project). Further to the east across Cross Creek Road are residential, industrial, and commercial uses and the Malibu Legacy Park site.

#### Approved Project

The Approved Project consists of re-dividing the Property’s two existing parcels into three parcels in order to accommodate the conveyance of a 2.3-acre area of the site

---

<sup>1</sup> *Revised Final EIR for the La Paz Development Agreement (SCH No. 2003011131), July 2008, [www.malibucity.org/376/La-Paz-Ranch-Project](http://www.malibucity.org/376/La-Paz-Ranch-Project).*



Mary Wright, AICP  
May 16, 2019  
Page 2

(Parcel C) to the City. The Approved Project provides for 20,000 square feet of municipal uses to be developed on Parcel C. The remaining two parcels (Parcels A and B), or 12.9 acres of the Property, are approved to be developed with 112,058 square feet of retail, restaurant, and office space.

### **Modified Project**

In the process of preparing to develop the Approved Project, MDC identified improvements to the Approved Project (“Modified Project”). The Modified Project proposes to enhance the pedestrian experience and includes an upgraded design; improved pedestrian walkways, plazas, and courtyards; better pedestrian access; improved vehicular access and parking that increases pedestrian and vehicular safety; a balanced mix of uses; and local serving dining options by converting 10,000 square feet of approved retail uses to restaurant uses. The Modified Project does not include any changes to the total square footage or maximum building heights proposed under the Approved Project and would maintain compliance with all setbacks, landscaping, and open space requirements. The Modified Project would commence in 2019 with opening in Spring 2021.

### **Comparative Analysis of Modified Project**

The analyses provided below address potential impacts related to air quality and greenhouse gas emissions from the Modified Project, as compared to the Certified Revised Final Environmental Impact Report for the Approved Project (“Revised Final EIR”). The analysis considers whether the Modified Project results in any air quality or greenhouse gas emissions beyond what was already analyzed in the Revised Final EIR and, if so, whether the incremental increase in emissions is significant. Based on the analyses below, the Modified Project would not result in any new significant air quality and greenhouse gas impacts or substantially increase in the severity of any previously identified significant impacts in the Revised Final EIR.

Subsequent to preparation of the Draft Environmental Impact Report for the Approved Project (“Draft EIR”), localized significance thresholds (“LSTs”) were developed by SCAQMD. The LST methodology was approved by SCAQMD in February 2005. On October 6, 2006, the SCAQMD also adopted a methodology to calculate PM<sub>2.5</sub> emissions and provided PM<sub>2.5</sub> significance thresholds.<sup>2</sup> In addition, subsequent to certification of the

---

<sup>2</sup> SCAQMD, *Final—Methodology to Calculate Particulate Matter (P.M.) 2.5 and PM<sub>2.5</sub> Significance Thresholds*, October 2006.



Mary Wright, AICP  
May 16, 2019  
Page 3

Revised Final EIR, the SCAQMD now recommends use of the California Emissions Estimator Model ("CalEEMod") instead of the previously SCAQMD recommended Urban Emissions Model ("URBEMIS"), which was used for analyzing air quality impacts for the Approved Project. Although these methodological changes are not Project modification, for informational purposes, additional analysis accounting for these methodology changes is provided below.

## **Air Quality**

### **Approved Project Impacts**

#### ***Construction***

Construction of the Approved Project would generate pollutant emissions from the following activities: (1) grading and excavation; (2) construction workers traveling to and from Project Site; (3) delivery and hauling of construction supplies and debris to and from the Project Site; (4) the fuel combustion by on-site construction equipment; and (5) architectural coating. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. As shown in Table IV.B-6 of the Revised Final EIR, the estimated daily emissions from construction would not exceed any of the South Coast Air Quality Management District ("SCAQMD") regional air pollutant emissions thresholds. Therefore, project-level and cumulative regional construction-related air quality impacts were concluded to be less than significant.

#### ***Operation***

Motor vehicles would be the predominant source of long-term emissions for the Approved Project. According to the Approved Project Traffic Study (see Table V.K-8 on page V.K-16 of Section V.K, Transportation and Circulation, of the Revised Final EIR), the Approved Project would generate an additional 2,863 daily vehicle weekday and 2,241 daily vehicle trips during the weekend.<sup>3</sup> As shown in Table IV.B-8, of the Revised Final EIR, the estimated daily emissions from operation would not exceed any of the SCAQMD regional air pollutant emissions thresholds. Therefore, project-level and cumulative regional operational-related air quality impacts were concluded to be less than significant. Localized carbon

---

<sup>3</sup> *Trip generation estimates were prepared using rates and equations contained in Institute of Transportation Engineers' Trip Generation, 6th Edition (ITE 6th Edition).*



Mary Wright, AICP  
May 16, 2019  
Page 4

monoxide (CO) impacts at the study intersections were also concluded to be less than significant.

The Approved Project was concluded to be substantially consistent with the underlying zoning and General Plan designations for the Project Site and would not exacerbate any existing violations of the State one- and eight-hour CO concentration standards. Therefore, the Approved Project was determined to be consistent with the AQMP and impacts would be less than significant.

## **Modified Project Impacts**

### ***Construction***

The Modified Project would not include any changes to the total square footage of the Approved Project. Furthermore, construction activities (e.g., approximate number of construction workers, heavy-duty construction equipment, and deliveries) would not change based on the Project Modifications. As such, there are no anticipated incremental increases in construction emissions under the Modified Project and impacts would remain less than significant.

SCAQMD developed localized significance thresholds (“LSTs”) and approved the LST methodology in February 2005. On October 6, 2006, the SCAQMD also adopted a methodology to calculate PM<sub>2.5</sub> emissions and provided PM<sub>2.5</sub> significance thresholds.<sup>4</sup> Although the Modified Project does not result in an increase in the intensity of proposed construction activities under the Approved Project and localized emissions would not incrementally change under the Modified Project, an evaluation of the Modified Project’s localized air quality impacts is provided below for informational purposes.

When quantifying emissions for localized analysis, only emissions that occur on-site are considered. Consistent with the SCAQMD LST methodology guidelines<sup>5</sup>, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. While the Project Site exceeds 5 acres, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed

---

<sup>4</sup> SCAQMD, *Final—Methodology to Calculate Particulate Matter (P.M.) 2.5 and PM<sub>2.5</sub> Significance Thresholds*, October 2006.

<sup>5</sup> SCAQMD, *Final Localized Significance Threshold Methodology*, revised July 2008.



Mary Wright, AICP  
May 16, 2019  
Page 5

analysis.<sup>6</sup> This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and would over predict potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If the project exceeds the LST look-up values, then the SCAQMD recommends that project specific air quality modeling must be performed.

With respect to construction air toxics, diesel particulate emissions represent the greatest potential for toxic air contaminant (TAC) emissions. The Modified Project does not result in an increase in the intensity of proposed construction activities under the Approved Project and release of TAC emissions would not incrementally change under the Modified Project. As with the Approved Project, construction of the Modified Project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions. Construction-related toxic emission impacts during construction of the Modified Project would be less than significant.

### ***Operation***

Similar to the Approved Project, air pollutant emissions associated with occupancy and operation of the Modified Project would primarily be generated by the operation of on-road vehicles. As discussed above, the daily trip generation rate used in the Revised Final EIR were calculated based on ITE's 6th Edition. As such, retail uses were analyzed as "specialty retail". Based on the City's direction, the analysis for the Modified Project includes the trip generation rates from the most recent version of ITE (ITE's 10th Edition) and are provided in Attachment A of this memorandum.<sup>7</sup> The "specialty retail" land use is no longer provided in ITE's 10th Edition. The applicable land use category in ITE's 10th Edition is "shopping center" and would include both retail and restaurant uses under this category. Therefore, the Modified Project impacts were calculated using the updated daily trips (ITE's 10th Edition) and re-evaluated using the SCAQMD's recommended CalEEMod model. The regional pollutant emissions from the Approved Project, provided in Table V.B-8, Proposed Project Daily Emissions, of the Revised Final EIR, were then subtracted from the Modified Project to determine the incremental change in regional emissions that would occur as a result of the Modified Project. The results of the regional operational analysis are shown in Table 1 on page 6. As shown in Table 1, incremental emissions associated with the Modified

---

<sup>6</sup> Telephone Conversation, Ian MacMillan, SCAQMD CEQA Program Supervisor, November 10, 2011.

<sup>7</sup> Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.



Mary Wright, AICP  
 May 16, 2019  
 Page 6

**Table 1**  
**Modified Project (Total Construction) Unmitigated Localized Construction Emissions**  
**(Pounds per Day)**

Emission Source	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Modified Project (Total Construction)</b>				
2019	27	12	6	4
2020	10	6	1	1
<b>Maximum Peak Daily Emissions</b>	<b>27</b>	<b>12</b>	<b>6</b>	<b>4</b>
<b>Comparison to SCAQMD LSTs</b>				
Modified Project Emissions <sup>a</sup>	<b>27</b>	<b>12</b>	<b>6</b>	<b>4</b>
SCAQMD Significance Threshold <sup>b</sup>	221	1,531	13	6
<b>Over/(Under)</b>	(194)	(1,519)	(7)	(2)
<p><sup>a</sup> The “Modified Project Emissions” provided in this table represent the full localized emissions associated with Modified Project for informational purposes. The incremental change in localized emissions associated with the Modified Project, as compared to the Approved Project, would be substantially lower than the emissions presented here.</p> <p><sup>b</sup> SCAQMD LSTs based on SRA 2, 5-acre active site area, and 25-meter receptor distance (single-family residences to the northeast of Parcel B of the Project Site).</p> <p>Source: Eystone Environmental, 2019.</p>				

Project would not exceed any SCAQMD regional operational significance thresholds. Please note that the change in pollutant emissions under the Modified Project is primarily a function of using the current SCAQMD recommended CalEEMod instead of URBEMIS and the change in the future buildout year (equipment and vehicle emissions decrease (i.e., emissions and vehicles become cleaner over time) in future years as emission control regulations are phased in over time with adoption of more stringent standards for future years).<sup>8</sup> Based on the above, the Modified Project would not result in any new impacts with respect to regional air quality during operation or increase the severity of any previously identified impacts identified in the Revised Final EIR. Therefore, impacts related to regional air quality during operation of the Modified Project would be less than significant. As discussed above, subsequent to preparation of the Draft EIR, the SCAQMD now recommends use of LSTs for evaluation of project impacts. An evaluation of the Modified Project’s localized air quality impacts is provided below for informational purposes. The

<sup>8</sup> California Air Resources Board. EMFAC2017 Volume III—Technical documentation, Chapter 5.1.3. July 20, 2018.



Mary Wright, AICP  
 May 16, 2019  
 Page 7

**Table 2**  
**Modified Project Unmitigated Operational Regional Emissions (Buildout 2021)<sup>a</sup>**  
**(pounds per day)**

Emission Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Modified Project (Incremental Regional Emissions)</b>						
Modified Project Regional Emissions (Total Project Site)	9	27	64	<1	17	5
On-Site (Area and Energy)	3	<1	<1	<1	<1	<1
Off-Site (Mobile)	6	27	64	<1	17	5
<b>Total</b>	<b>9</b>	<b>27</b>	<b>64</b>	<b>&lt;1</b>	<b>17</b>	<b>5</b>
Approved Project (Total Project Site) <sup>b</sup>	24	46	214	<1	2	NA <sup>c</sup>
<b>Modified Project Increment</b>	<b>(15)</b>	<b>(19)</b>	<b>(148)</b>	<b>0</b>	<b>15</b>	<b>5<sup>c</sup></b>
SCAQMD Significance Threshold	55	55	550	150	150	55
<b>Significant</b>	No	No	No	No	No	No
<p><sup>a</sup> Compiled using the CalEEMod emissions inventory model. The operational emission assumptions are provided in Attachment A of this memorandum.</p> <p><sup>b</sup> Table V.B-8 on page V.B-17, Section V.B, Air Quality, of the Revised Final EIR.</p> <p><sup>c</sup> The Revised Final EIR did not evaluate PM<sub>2.5</sub> impacts.</p> <p>Source: Eystone Environmental, 2019.</p>						

results of the localized operational analysis are shown in Table 2 on page 7. As shown in Table 3 on page 8, the Modified Project would not exceed any SCAQMD localized operational significance thresholds.

With regard to traffic-related localized air quality impacts, the incremental change in peak-hour trips under the Modified Project would result in a decrease of 16 percent in peak-hour weekday A.M. trips, an increase of 4 percent peak-hour weekday P.M. trips, and an increase of 32 percent peak-hour weekend trips as compared to the Approved Project.<sup>9</sup> The traffic-related air quality impact analysis for the Approved Project was provided on Tables V.B-9 (Weekday) and V.B-10 (Weekend) on page V.B-19, Section V.B, Air Quality, of the Revised Final EIR. As shown therein, the maximum incremental change as a result of project-generated traffic was 0.3 ppm for the 1-hour CO concentration and 0.2 ppm for the

<sup>9</sup> Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.



Mary Wright, AICP  
 May 16, 2019  
 Page 8

**Table 3  
 Modified Project Unmitigated Operational Localized Emissions (Buildout 2021)<sup>a</sup>  
 (pounds per day)**

Emission Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Comparison to SCAQMD Thresholds (Localized)</b>						
Modified Project Localized Emissions (Total Project Site)	3	<1	<1	<1	<1	<1
SCAQMD Significance Threshold <sup>b</sup>	—	221	1,531	—	3	2
<b>Over/(Under)</b>	—	(221)	(1,531)	—	(3)	(2)
<p><sup>a</sup> Compiled using the CalEEMod emissions inventory model. The operational emission assumptions are provided in Attachment A of this memorandum.</p> <p>The “Modified Project Emissions” provided in this table represent the full localized emissions associated with Modified Project for informational purposes. The incremental change in localized emissions associated with the Modified Project, as compared to the Approved Project, would be substantially lower than the emissions presented here.</p> <p><sup>b</sup> SCAQMD LSTs based on SRA 2, 5-acre active site area, and 25-meter receptor distance.</p> <p>Source: Eystone Environmental, 2019.</p>						

8-hour CO concentration. Assuming a maximum 32 percent increase in the incremental change of peak-hour trips as the result of the Modified Project would result in an incremental increase of 0.1 ppm for the 1-hour and 8-hour CO concentrations. This incremental increase in CO concentrations would result in a maximum 1-hour CO concentration of 7.2 ppm (threshold is 20 ppm) and an 8-hour CO concentration of 4.4 ppm (threshold is 9.0 ppm) under the Modified Project. Therefore, the incremental changes in traffic-related localized air quality impacts would be slightly more (i.e., 0.1 ppm) for the Modified Project than for the Approved Project. In addition, ambient CO concentrations within the Air Basin have decreased subsequently to completion of the Revised Final EIR. The CO background concentration at the closest monitoring station to the Project Site (Northwest Coastal Los Angeles County) shows that the 1-hour CO concentration has decreased from 4.3 ppm in 2003 to 1.9 in 2017 and 8-hour CO concentration has decreased from 2.7 ppm in 2003 to 1.2 ppm in 2017. The 0.1 ppm CO concentration increase as the result of the increase in peak-hour trips under the Modified Project would be more than offset by the decrease in overall background CO concentrations. Since the localized CO hotspot analysis for the Approved Project did not result in any significant impacts, the Modified Project would likewise not have any localized significant impacts.



Mary Wright, AICP  
May 16, 2019  
Page 9

An analysis was conducted to determine whether the incremental changes in emissions associated with the Modified Project would result in the siting of substantial sources of toxic air contaminants near any off-site sensitive receptors that would result in a significant health impact. The number of delivery trucks that would occur under the Modified Project would be substantially similar to the number of delivery trucks under the Original Project. Any increase in estimated emissions associated with a relatively minor increase in delivery trucks for retail uses would be more than offset by the decrease in estimated emissions resulting from improved vehicle emission factors for the Modified Project as compared to the Original Project analysis (i.e., vehicles become cleaner over time). As a result, the Modified Project would not result in any new impacts with respect to toxic air contaminants or any increase in the severity of any previously identified impacts, and any such impacts would be similar to those identified in the Revised Final EIR. Therefore, impacts related to toxic air contaminants under the Modified Project would be less than significant.

### ***Mitigation Measures***

The mitigation measures set forth in the Mitigation and Monitoring Program (MMRP) included in the Revised Final EIR and provided below remain applicable to the Modified Project. No additional mitigation measures are required due to the development of the Modified Project.

The following mitigation measures, as recommended by the SCAQMD, shall be implemented for all areas (both on-site and off-site) where construction would occur in order to reduce PM<sub>10</sub> emissions to a less-than-significant level.

- B-1. The construction area and vicinity (500-foot radius) shall be swept (preferably with water sweepers) and watered at least twice daily.
- B-2. All unpaved roads, parking and staging areas shall be watered at least once every two hours of active operations.
- B-3. Site access points shall be swept/washed of visible dirt deposition at the end of each workday.
- B-4. On-site stockpiles of debris, dirt or rusty material shall be covered or watered at least twice daily.
- B-5. All haul trucks hauling soil, sand, and other loose materials shall either be covered or maintain two feet of freeboard.



Mary Wright, AICP  
May 16, 2019  
Page 10

- B-6. All haul trucks shall have a capacity of no less than twelve and three-quarter (12.75) cubic yard.
- B-7. At least 80 percent of all inactive disturbed surface areas shall be watered on a daily basis when there is evidence of wind-driven fugitive dust.
- B-8. Operations on any unpaved surfaces shall be suspended when winds exceed 25 mph.
- B-9. Traffic speeds on unpaved roads shall be limited to 15 miles per hour.
- B-10. Operations on any unpaved surfaces shall be suspended during first and second stage smog alerts.

### ***Impacts After Mitigation***

As with the Approved Project, implementation of the above mitigation measures would ensure that fugitive dust emissions from the Modified Project would be reduced, consistent with SCAQMD Rule 403 requirements.

## **Greenhouse Gas Emissions**

### **Approved Project**

Greenhouse Gas ("GHG") impacts were added to the required list of issues to be evaluated under CEQA in 2008, subsequent to certification of the Revised Final EIR. As a result, analysis of GHG impacts associated with the Approved Project were not included in the Revised Final EIR.

### **Modified Project**

As shown above in Table 1 on page 6, incremental regional air pollutant emissions are expected to decrease under the Modified Project. The reduction in incremental emissions under the Modified Project is primarily a function of using the current SCAQMD recommended CalEEMod instead of URBEMIS and the change in the future buildout year (equipment and vehicle emissions decrease (cleaner) in future years as emission control regulations are phased in over time with adoption of more stringent standards for future years). Incremental GHG emissions would similarly decrease under the Modified Project for the same reasons discussed above. Because GHG emissions associated with the Modified Project would be no greater than the Approved Project, there would be no incremental increase in GHG emissions from the Project Modifications and, therefore, the Modified Project would be less than significant with respect to GHG emissions.

Mary Wright, AICP  
May 16, 2019  
Page 11

For informational purposes, the following provides additional information about the environmental and regulatory setting for GHG emissions and evaluates the consistency of the Modified Project with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

### ***Regulatory Updates***

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, into law. AB 32 commits the State to the following:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 levels; and
- By 2050, reduce to 80 percent below 1990 levels.

AB 32 requires that CARB determine what the statewide GHG emissions level was in 1990 and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. Executive Order (EO) B-30-15, which was issued in April 2015 by Governor Brown, requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. SB 32, signed into law in September 2016, codifies the 2030 GHG reduction target in EO B-30-15. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

### ***Scoping Plan***

CARB approved a Climate Change Scoping Plan (2008 Scoping Plan) required by AB 32 in 2008.<sup>10</sup> The 2008 Scoping Plan proposes a “comprehensive set of actions designed

---

<sup>10</sup> *Climate Change Proposed Scoping Plan was approved by the California Air Resources Board on December 11, 2008.*



Mary Wright, AICP  
May 16, 2019  
Page 12

to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.”<sup>11</sup> The First Update to the AB 32 Scoping Plan (First Update), released on May 22, 2014, found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.<sup>12</sup>

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California’s 2030 Greenhouse Gas Target (2017 Update). The 2017 Update builds upon the successful framework established by the 2008 Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the state’s largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constraints and reduces emissions at covered sources.<sup>13</sup>

The California Attorney General’s Office has taken an active role in addressing climate change in CEQA documents. The Attorney General’s Office has created and routinely updates a Fact Sheet listing project design features to reduce greenhouse gas emissions.<sup>14</sup> The Attorney General’s Office created the Fact Sheet primarily for the benefit of local agencies processing CEQA documents, noting that “local agencies will help to move the State away from ‘business-as-usual’ and toward a low-carbon future.” The Fact Sheet explains that the listed “measures can be included as design features of a project,” but emphasizes that they “should not be considered in isolation, but as part of a larger set of

---

<sup>11</sup> *Climate Change Scoping Plan, CARB, December 2008, [www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm](http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm), last reviewed April 3, 2013.*

<sup>12</sup> *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, May 2014, p. 34.*

<sup>13</sup> *CARB, 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California’s 2030 Greenhouse Gas Target, November 2017, p. 6.*

<sup>14</sup> *California Attorney General’s Office Fact Sheet, The CEQA—Addressing Global Warming Impacts at the Local Agency Level, revised January 6, 2010.*

Mary Wright, AICP  
May 16, 2019  
Page 13

measures that, working together, will reduce greenhouse gas emissions and the effects of global warming.”

*Southern California Association of Governments*

SCAG recently adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.<sup>15, 16</sup> The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016–2040 RTP/SCS’s strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;<sup>17</sup>
- Develop “Complete Communities”;
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The 2016–2040 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close relationship will help the region make choices that sustain existing resources and expand efficiency, mobility,

---

<sup>15</sup> SCAG, *Final 2016–2040 RTP/SCS*.

<sup>16</sup> CARB, *Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016*.

<sup>17</sup> Complete language: “Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment.” A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.

Mary Wright, AICP  
May 16, 2019  
Page 14

and accessibility for people across the region. In particular, the 2016–2040 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016–2040 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2016–2040 RTP/SCS states that the SCAG region is home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs. By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. High Quality Transit Areas<sup>18</sup> (HQTAs) will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040. The 2016–2040 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2016–2040 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and 18 percent by 2035. This level of reduction would meet and exceed the region’s GHG targets set by CARB of 8 percent per capita by 2020 and 13 percent per capita by 2035.<sup>19</sup> Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS’s GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.<sup>20</sup> The 2016–2040 RTP/SCS would result in an estimated 21 percent decrease in per capita GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and

---

<sup>18</sup> Defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours

<sup>19</sup> SCAG, *Final 2016–2040, RTP/SCS, Executive Summary*, p. 8, April 2016.

<sup>20</sup> SCAG, *Final Program Environmental Impact Report for 2016–2040, RTP/SCS*, April 2016, Figure 3.8.4-1.

exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

### ***Significance Thresholds***

The Governor's Office of Planning and Research (OPR) recommended Amendments to the CEQA Guidelines for GHGs which were adopted on December 30, 2009. CEQA Guidelines Section 15064.4 was adopted to assist lead agencies in determining the significance of the impacts of GHGs. Consistent with the developing practice, this section of the CEQA Guidelines urges lead agencies to quantify GHG emissions of projects where possible and includes language necessary to avoid an implication that a "life-cycle" analysis is required. In addition to quantification, CEQA Guidelines Section 15064.4 recommends consideration of several other qualitative factors that may be used in the determination of significance (i.e., the extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to reduce or mitigate GHGs).

CEQA Guidelines Section 15064.4 does not establish a threshold of significance; instead lead agencies are called on to establish significance thresholds for their respective jurisdictions in which a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officer's Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence.<sup>21</sup> The CEQA Guidelines Amendments also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analyses.<sup>22</sup>

Lead agencies must either establish significance thresholds for their respective jurisdictions or determine significance on a case-by-case basis. The lead agency should use its "careful judgment" in making a determination of significance, and should make a "good-faith" effort to "describe, calculate or estimate" the amount of GHGs that will result from a project.<sup>23,24</sup> The lead agency is given the discretion to select a reasonable model and

---

<sup>21</sup> CEQA Guidelines Section 15064.7(c).

<sup>22</sup> CEQA Guidelines Section 15130 (f).

<sup>23</sup> CEQA Guidelines Section 15064.4(a).

<sup>24</sup> CEQA Guidelines Section 15064.4(a).



Mary Wright, AICP  
May 16, 2019  
Page 16

methodology to quantify GHGs and to rely on a qualitative analysis or performance based standards for its determination.<sup>25</sup> A lead agency should also consider the following factors, among others, when assessing the significance of impacts from GHGs: (1) the extent to which the project may increase or reduce GHGs; (2) whether the GHG emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, local plan for the reduction or mitigation of GHG emissions.<sup>26</sup>

The California Supreme Court's decision published on November 30, 2015, in the *Center for Biological Diversity v. California Department of Fish and Wildlife* (62 Cal.4th 204) (also known as the Newhall Ranch Case) reviewed the methodology used to analyze GHG emissions in CEQA. The California Supreme Court suggested regulatory consistency as one pathway to compliance, by stating that a lead agency might assess consistency with AB 32's goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. Importantly, the Court also suggested: "A lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions" (bright line threshold approach) if supported by substantial evidence.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.<sup>27</sup> Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 metric tons of GHGs measured as an equivalent mass of carbon dioxide ("MTCO<sub>2</sub>e") per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 MTCO<sub>2</sub>e per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g.,

---

<sup>25</sup> CEQA Guidelines Section 15064.4(a)(1)-(2).

<sup>26</sup> CEQA Guidelines Section 15064.4(b).

<sup>27</sup> SCAQMD, *Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

residential/commercial projects); therefore, the commercial/residential thresholds were not formally adopted.<sup>28</sup>

For the Modified Project, no applicable numeric significance threshold for GHG emissions has been adopted by the State, SCAQMD, or the City of Malibu. Although state, regional, and local plans and policies have been adopted to help address climate change (see discussions above), no current law or regulation would regulate all aspects of the Modified Project's GHG emissions.

As indicated above, the Modified Project would not result in an incremental increase in GHG emissions; therefore, the Modified Project would have a less than significant impact with respect to GHG emissions. For informational purposes, in the absence of any adopted numeric threshold, the Modified Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Modified Project is consistent with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. For this Modified Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions are CARB's Scoping Plan, SCAG's 2016–2040 RTP/SCS, , and City of Malibu General Plan.

### ***Modified Project Design Features***

The following project design features are proposed conservation measures that meet or go beyond the minimum requirements of the California Green Building Code, the California Code, and local ordinances that would serve to reduce GHG emissions:

- GHG-PDF-1:** The design of the new building shall incorporate the following sustainability features:
- Exceed Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency by an average of 14 percent, based on the 2016 Building Energy Efficiency Standards requirements.
  - Use high-efficiency Energy Star HVAC equipment and appliances.

---

<sup>28</sup> SCAQMD, *Greenhouse Gases (GHG) CEQA Significance Thresholds*.

- Use energy-efficient light-emitting diode (LED) lighting fixtures, occupancy sensors, dimming controls, and other lighting control strategies to reduce electricity use.
- The design makes provisions to allow for future installation of photovoltaic panels to reduce utility provided power.
- Use of water-efficient plantings with drought-tolerant species.
- Allocate eight percent of the code-required parking spaces as preferred parking for alternative-fuel vehicles, low-emitting, and fuel-efficient and carpool/van pool vehicles.

**GHG-PDF-2:** A minimum of six percent of the total code-required parking spaces shall be equipped with EV charging stations. Project plans shall indicate the proposed type and location(s) of charging stations. Plan design shall be based on Level 2 or greater EVSE at its maximum operating capacity.

### ***GHG Emissions Inventory***

#### ***Construction***

As indicated above, the Modified Project will not result in an incremental increase in GHG emissions during construction as compared to the Approved Project. However, for informational purposes, the full GHG emissions of the Modified Project is presented in this subsection.

GHG emissions from construction activities were forecasted using a reasonable estimate of construction schedule and phasing and applying published GHG emission factors. Construction emissions were calculated using the CalEEMod model. The output values used in this analysis were adjusted to be project-specific, based on usage rates, type of fuel, and construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis (discussed above) to generate GHG emissions values for each construction year (refer to Attachment B of this memorandum).

As presented in Table 4 on page 19, construction of the Modified Project is estimated to generate a total of 398 MTCO<sub>2e</sub>. As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Modified Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction

Mary Wright, AICP  
May 16, 2019  
Page 19

**Table 4**  
**Construction-Related GHG Emissions**  
**(MTCO<sub>2e</sub>)**

Year	MTCO <sub>2e</sub> <sup>a</sup>
2019	272
2020	126
<b>Total</b>	<b>398<sup>c</sup></b>
<b>Amortized Over 30 Years<sup>b</sup></b>	<b>13</b>

<sup>a</sup> MTCO<sub>2e</sub> = metric tons of an equivalent mass of carbon dioxide. CO<sub>2e</sub> was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Attachment B of this memorandum.

<sup>b</sup> As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Modified Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Modified Project's operational emissions) in order to determine the Modified Project's annual GHG emissions inventory.

<sup>c</sup> The total GHG emissions of the Modified Project during construction are presented here for informational purposes and do not represent an incremental increase relative to the Approved Project.

Source: Eyestone Environmental, 2019.

emissions estimate that can be added to the Modified Project's operational emissions) in order to determine the Modified Project's annual GHG emissions inventory.<sup>29</sup> A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Attachment B of this memorandum.

### *Operation*

As indicated above, the Modified Project will not result in an incremental increase in GHG emissions during operations as compared to the Approved Project. However, for informational purposes, the full GHG emissions of the Modified Project during operations is presented in this subsection.

<sup>29</sup> SCAQMD, *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

Mary Wright, AICP  
May 16, 2019  
Page 20

The Modified Project would result in direct and indirect GHG emissions in comparison to the existing condition generated by the increase in vehicular trips as well as operations associated with the proposed building, including: (1) building operations: emissions associated with space heating and cooling, water heating, and lighting; (2) water: emissions associated with energy used to pump, convey, treat, deliver, and re-treat water; and (3) solid waste: emissions associated with waste streams (embodied energy of materials). Operational emissions from the sources described above were estimated using CalEEMod for the Modified Project in order to determine the increase in GHG emissions as a result of implementation of the Modified Project. Mobile source emissions are based on the vehicle emission factors from EMFAC and the trip length values for the project land uses in CalEEMod, which are South Coast Air Basin-wide average trip distance values. To estimate the total vehicle miles traveled (VMT) generated by Modified Project trips, trip generation rates provided in the Modified Project's Traffic Memo included in Attachment A of this memorandum were used.<sup>30</sup> CalEEMod calculates reductions in VMT relative to the standard VMT rates in CalEEMod based on site-specific characteristics, such as increased job density and diversity of land uses on the site, using the equations and methods prescribed in the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*.<sup>31</sup>

As noted above, the SCAQMD identified a screening criteria of 3,000 MTCO<sub>2</sub>e/yr for mixed-use projects to determine whether a land use project could presumptively have less than significant GHG impacts if it produced less GHGs than the screening criteria. As shown in Table 5 on page 21, the Modified Project would result in 2,903 MTCO<sub>2</sub>e/yr for combined construction and operational GHGs with implementation of project design features. As a result, the net Modified Project GHG emissions of 2,903 MTCO<sub>2</sub>e/yr would be less than the 2008 SCAQMD draft 3,000 MTCO<sub>2</sub>e/yr screening level.

### ***Consistency with Applicable Plans and Policies***

The analysis below describes the extent to which the Modified Project complies with or exceeds the performance-based standards included in the regulations outlined in CARB's Scoping Plan and subsequent updates, SCAG's 2016–2040 RTP/SCS, and City of Malibu General Plan. As shown herein, the Modified Project would be consistent with the applicable GHG reduction plans and policies.

---

<sup>30</sup> Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.

<sup>31</sup> CAPCOA, *Quantifying Greenhouse Gas Mitigation Measures* (2010).

**Table 5**  
**Operational Greenhouse Gas Emissions**

<b>Emission Source</b>	<b>Modified Project With Project Design Features CO<sub>2e</sub> (metric tons)</b>
Area <sup>b</sup>	<1
Energy <sup>c</sup>	487
Mobile <sup>d</sup>	2,308
Solid Waste <sup>e</sup>	17
Water/Wastewater <sup>f</sup>	78
Construction	13
<b>Total Emissions</b>	<b>2,903<sup>g</sup></b>

<sup>a</sup> CO<sub>2e</sub> was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Attachment B of this memorandum.

<sup>b</sup> Area source emissions are from landscape equipment.

<sup>c</sup> Energy source emissions are based on CalEEMod default electricity and natural gas usage rates and includes reductions associated with GHG-PDF-1 (Exceed Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency by an average of 14 percent and a 25% reduction for use of energy-efficient LED lighting fixtures, occupancy sensors, dimming controls, and other lighting control strategies.

<sup>d</sup> Mobile source emission reductions account for internal capture from retail uses and applicable CAPCOA Measures (See Attachment B of this memorandum).

<sup>e</sup> Solid waste emissions are calculated based on CalEEMod default solid waste generation rates with a 75 percent diversion rate (Los Angeles County Integrated Waste Management Plan, 2016).

<sup>f</sup> Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates and includes reductions associated with applicable provisions of the municipal code (Chapters 9.22 and 15.24).

<sup>g</sup> The total GHG emissions of the Modified Project during operations are presented here for informational purposes and do not represent an incremental increase relative to the Approved Project.

Source: Eystone Environmental, 2019.

### *CARB's Climate Change Scoping Plan*

The Scoping Plan includes a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a Cap-and-Trade system, and an AB 32 and SB 32 implementation fee to fund the program. Provided in Table 6 on page 22 is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Modified Project would be consistent with or exceed the reduction

**Table 6**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<b>Area Sources</b>		
<b>SCAQMD Rule 445 (Wood Burning Devices):</b> Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	<b>Consistent.</b> The Modified Project would not include wood burning devices or stoves. Accordingly, the Modified Project would be consistent with this regulation.
<b>Energy Usage</b>		
<b>California Renewables Portfolio Standard (RPS) program:</b> SB 2X modified California’s RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.	SCE	<b>Consistent.</b> SCE’s commitment to achieve 33 percent renewables by 2020 would meet the requirement under the RPS program of 33 percent renewables by 2020. In 2017, SCE indicated that 28 percent of its electricity came from renewable resources in Year 2016. <sup>a</sup> As SCE would provide electricity service to the Project Site, the Modified Project would use electricity that is produced consistent with this performance-based standard.
<p><b>SB 350:</b> SB 350, the Clean Energy and Pollution Reduction Act of 2015 requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030.<sup>a</sup></p> <p>Required measures include:</p> <ul style="list-style-type: none"> <li>• Increase RPS to 50 percent of retail sales by 2030.</li> <li>• Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.</li> <li>• Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly-owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. and also requires the</li> </ul>	State Energy Resources Conservation and Development Commission and SCE	<p><b>Consistent.</b> SCE would be required to generate electricity that would increase renewable energy resources to 50 percent by 2030. As SCE would provide electricity service to the Project Site, by 2030, the Modified Project would use electricity consistent with the requirements of SB 350.</p> <p>As required under SB 350, doubling of the energy efficiency savings from final end users of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under the CCR, Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, heating ventilation and air-conditioning (HVAC) systems and insulation.</p> <p>This regulation does not directly apply to the project but GHG emissions from project-related electricity use would benefit from this regulation. The project would not conflict with implementation of SB 350.</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<p>State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.</p>		
<p><b>SB 1368:</b> SB 1368 establishes the GHG Emissions Standard for Baseload Generation which prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.</p>	<p>State, CEC, and SCE</p>	<p><b>Consistent.</b> SCE meets the requirements of SB 1368. As SCE would provide electricity service to the Project Site, the Modified Project would use electricity that meets the requirements under SB 1368.</p>
<p><b>CCR, Title 20:</b> The 2016 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.</p>	<p>State and CEC</p>	<p><b>Consistent.</b> The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Modified Project would be outfitted with appliances and lighting that comply with CEC standards. In addition, the Modified Project would implement other sustainability features such as Energy Star appliances and efficient lighting, thus reducing overall energy usage compared to baseline conditions.</p>
<p><b>CCR Title 24, Building Standards Code:</b> The 2016 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.</p> <p>The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.</p>	<p>State and CEC</p>	<p><b>Consistent.</b> The California Green Building Standards offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. As discussed above in PDF GHG-1, the Modified Project would exceed Title 24 energy efficiency requirements by 14 percent and implement other sustainability features, thus reducing overall energy usage compared to baseline conditions. Thus, the Modified Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the Scoping Plan to reduce GHG emissions.</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<p><b>Energy Independence and Security Act of 2007 (EISA):</b> EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.</p>	<p>Federal/ Manufacturers</p>	<p><b>Consistent.</b> The Energy Independence and Security Act of 2007 (EISA) reduces the use of incandescent light bulbs, including within the Modified Project and, thus, reduces energy usage associated with lighting.</p>
<p><b>Cap-and-Trade Program:</b> The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.</p>	<p>State</p>	<p><b>Consistent.</b> As required by AB 32 and SB 32 and the Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. The current Cap-and-Trade Program would end on December 31, 2020. AB 398 was enacted in 2017 to extend and clarify the role of the State’s Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions. The Modified Project would benefit from this regulatory program in that the GHG emissions associated with the Modified Project’s electricity usage would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.</p>
<p><b>Million Solar Roofs Program:</b> The program is implemented through SB 1 (Murray, 2006), which provides up to \$3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.</p>		<p><b>Not Applicable.</b> The Modified Project would exceed Title 24 energy efficiency requirements by 14 percent and incorporate energy-efficient design methods and technologies, such as high-performance window glazing; undergrounding parking to reduce heat island effects; and enhanced insulation to minimize solar heat gain. The Modified Project is not currently anticipated to include solar roofing materials or photovoltaic cells; thus, the</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
		Modified Project would not be eligible for the financial incentives offered by this program. However, the Modified Project would make design provisions to allow for future installation of photovoltaic panels to reduce utility provided power. Thus, the Modified Project would be considered “solar-ready.”
<b>Mobile Sources</b>		
<p><b>Low Carbon Fuel Standard:</b> Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent.</p>	State, CARB	<p><b>Consistent. Consistent.</b> This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Modified Project would benefit from this regulation through reduced GHG emissions as this program is implemented over time. The Modified Project would not conflict with or impede implementation of the program.</p> <p>The current LCFS, adopted in 2007, requires a reduction of at least 10 percent in the carbon intensity (CI) of California’s transportation fuels by 2020. The CARB has proposed an amendment to the LCFS regulation to target a 20-percent reduction in CI from a 2010 baseline by 2030. The amendments were released in March 2018 with the public comment period ending in April 2018. The proposed amendments were adopted in September 2018 with a Board hearing and vote.<sup>b</sup></p>
<p><b>Implement Mobile Source Strategy (Cleaner Technology and Fuels)</b></p> <ul style="list-style-type: none"> <li>• At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.</li> <li>• At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.</li> <li>• Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.</li> </ul>	CARB, CalSTA, SGC, Caltrans, CEC, OPR, Local agencies	<p><b>Consistent.</b> CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by employees and deliveries to the Modified Project. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<ul style="list-style-type: none"> <li>• Medium- and heavy-duty GHG Phase 2.</li> <li>• Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO<sub>x</sub> standard.</li> <li>• Last Mile Delivery: New regulation that would result in the use of low NO<sub>x</sub> or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.</li> <li>• Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.”</li> </ul>		<p>been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030.</p> <p>CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.<sup>c,d</sup></p> <p>GHG emissions generated by project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Modified Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32 and SB 32. The Modified Project would not conflict with implementation of the Advanced Clean Cars Program. Mobile source GHG emissions conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Modified Project would also benefit from these measures once adopted.</p> <p>SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Modified Project represents an infill development within an existing urbanized area. The 2016–2040 RTP/SCS would result in an estimated 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040.</p>

Mary Wright, AICP  
May 16, 2019  
Page 27

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
		<p>The Modified Project results in a mobile GHG emissions reduction of approximately 27 percent compared to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS.</p>
<p><b>SB 375:</b> SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each MPO would be required to adopt an SCS to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.</p>	<p>State, CARB Regional, SCAG</p>	<p><b>Consistent.</b> Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every eight years, which was last updated in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035.</p> <p>The Modified Project would be consistent with SB 375 for developing an infill project within an existing urbanized area. Project-related transportation emissions would be reduced by approximately 27 percent relative to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375 and the 2016–2040 RTP/SCS.</p>
<p><b>By 2019, adjust performance measures used to select and design transportation facilities.</b> Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).</p>	<p>CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans</p>	<p><b>Not Applicable.</b> The Modified Project would not involve construction of transportation facilities. Therefore, the Modified Project would not interfere or impede the implementation of performance measures used to select and design transportation facilities.</p>
<p><b>Implement California Sustainable Freight Action Plan:</b></p>	<p>CARB</p>	<p><b>Not Applicable.</b> The Modified Project land uses would not include freight transportation or</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<ul style="list-style-type: none"> <li>• Improve freight system efficiency.</li> </ul> Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		warehousing. Therefore, the Modified Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
<b>Solid Waste</b>		
<p><b>AB 939:</b> AB 939, the California Integrated Waste Management Act of 1989, requires each jurisdiction’s source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.<sup>e</sup></p> <p><b>AB 341:</b> AB 341 amended AB 939 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.<sup>f</sup></p>	State	<b>Consistent.</b> The Modified Project’s solid waste generation would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would in turn decrease the amount of methane released from the decomposing solid waste. Project-related GHG emissions from solid waste generation include a 75-percent reduction in solid waste generation, consistent with AB 341. In addition, the Modified Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. Further, the Modified Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous construction debris.
<b>Water</b>		
<p><b>CCR, Title 24, Building Standards Code:</b> The CalGreen Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.</p>	State	<b>Consistent.</b> The Modified Project would comply with applicable provisions of the CalGreen code (20-percent overall water use reduction). As shown above in Attachment B of this memorandum, implementation of applicable provisions of the municipal code (Chapters 9.22 and 15.24) such as high-efficiency fixtures and appliances, weather-based irrigation systems, drought-tolerant landscaping, and reclaimed water for irrigation would result in an overall reduction in GHG emissions from water usage by 38 percent as compared to CalEEMod default water consumption rates.
<p><b>SB X7-7:</b> SB X7-7, the Water Conservation Act of 2009, sets an overall goal of reducing</p>	State	<b>Consistent.</b> As discussed above under Title 24, the Modified Project would incorporate

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<p>per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the <i>Climate Change Scoping Plan</i>. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convey, treat, and distribute the water; it also reduces emissions from wastewater treatment.</p>		<p>water conservation features that would contribute towards meeting this performance based standard. The Modified Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.</p>
<b>Construction</b>		
<p><b>CARB In-Use Off-Road Regulation:</b> CARB’s in-use off-road diesel vehicle regulation (“Off-Road Diesel Fleet Regulation”) requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.</p>	CARB	<p><b>Consistent.</b> The Applicant would use construction contractors that comply with this regulation.</p>
<p><b>CARB In-Use On-Road Regulation:</b> CARB’s in-use on-road heavy-duty vehicle regulation (“Truck and Bus Regulation”) applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.<sup>9</sup></p>	CARB	<p><b>Consistent.</b> The Applicant would use construction contractors that comply with this regulation.</p>
<b>Other</b>		
<p><b>By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California’s land base as a net carbon sink:</b></p> <ul style="list-style-type: none"> <li>• Protect land from conversion through conservation easements and other incentives.</li> <li>• Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity</li> <li>• Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments</li> </ul>	CNRA and departments within, CDFA, CalEPA, CARB	<p><b>Not Applicable.</b> This regulatory program applies to Natural and Working Lands, not directly related to development of the Project. The Modified Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.</p>

**Table 6 (Continued)**  
**Consistency Analysis—CARB’s Scoping Plan**

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
<ul style="list-style-type: none"> <li>Establish scenario projections to serve as the foundation for the Implementation Plan</li> </ul>		
<p><b>Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018</b></p>	CARB	<p><b>Not Applicable.</b> This regulatory program applies to Natural and Working Lands, not directly related to development of the Modified Project. The Modified Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.</p>
<p><b>Implement Forest Carbon Plan</b></p>	CNRA, CAL FIRE, CalEPA	<p><b>Not Applicable.</b> This regulatory program applies to state and federal forest land, not directly related to development of the Modified Project. The Modified Project would not interfere or impede implementation of the Forest Carbon Plan.</p>
<p><b>Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.</b></p>	State Agencies & Local Agencies	<p><b>Not Applicable.</b> Funding and financing mechanisms are the responsibility of the state and local agencies. The Modified Project would not conflict with funding and financing mechanisms to support GHG reductions.</p>
<hr/> <p><sup>a</sup> Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.</p> <p><sup>b</sup> CARB, LCFS Rulemaking Documents, <a href="http://www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm">www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm</a>.</p> <p><sup>c</sup> CARB, Advance Clean Cars, Midterm Review, <a href="http://www.arb.ca.gov/msprog/acc/acc-mtr.htm">www.arb.ca.gov/msprog/acc/acc-mtr.htm</a>.</p> <p><sup>d</sup> CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), <a href="http://www.arb.ca.gov/msprog/actruck/actruck.htm">www.arb.ca.gov/msprog/actruck/actruck.htm</a>.</p> <p><sup>e</sup> California Public Resources Code Section 41780(a).</p> <p><sup>f</sup> California Public Resources Code Section 41780.01(a).</p> <p><sup>g</sup> CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, <a href="http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm">www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm</a>, page last reviewed by CARB on December 14, 2017.</p> <p>Source: CARB, Climate Change Scoping Plan, December 2008; CARB, First Update to the Climate Change Scoping Plan, 2014; CARB, California’s 2017 Climate Change Scoping Plan, 2017.</p>		

actions/strategies outlined in the Scoping Plan. As discussed therein, the Modified Project would be consistent with the GHG reduction-related actions and strategies of the Scoping Plan.

Mary Wright  
May 16, 2019  
Page 31

### *SCAG 2016–2040 RTP/SCS*

SCAG’s 2016–2040 RTP/SCS, adopted on April 7, 2016, presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The mission of the 2016–2040 RTP/SCS is to provide “leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians.” The 2016–2040 RTP/SCS places a greater emphasis on sustainability and integrated planning compared to previous versions of the RTP, and identifies mobility, accessibility, sustainability, and high quality of life, as the principles most critical to the future of the region. The goals and policies of the 2016–2040 RTP/SCS that focus on reducing VMT feature transportation and land use planning that include adopted after the 2016–2040 RTP/SCS (adopted on April 7, 2016), it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State’s GHG emission reduction goals. The Modified Project supports a reduction in VMT of approximately 27 percent compared to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS.

In sum, the Modified Project is a land use development that is consistent with the 2016-2040 RTP/SCS to support a reduction in regional VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State’s long-term climate policies.<sup>32</sup> By furthering implementation of SB 375, the Modified Project would support regional land use and transportation GHG reductions consistent with state regulatory requirements. Therefore, the Modified Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016–2040 RTP/SCS. Overall, the Modified Project would not conflict with the 2016–2040 RTP/SCS, which is intended to reduce GHG emissions.

---

<sup>32</sup> As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.



Mary Wright  
May 16, 2019  
Page 32

### *City of Malibu*

The City of Malibu General Plan identifies goals and policies relating to the improving of safety and health of the community. The current General Plan does not specifically address emissions of GHGs; however, the City supports the SCAQMD's mission to protect public health and welfare from the adverse effects of air pollution. These are summarized identified sustainability policies within its General Plan Conservation Element. The specific policies that relate to energy conservation, water conservation, and solid waste reduction would all have a GHG emissions reduction co-benefit. Consistency with applicable polices included in the Conservation Element of the City of Malibu General Plan are discussed in Table 7 on page 33.

### *Summary of Consistency with Applicable Plans and Policies*

Given the Modified Project's consistency with State, regional, and local GHG emission reduction goals and objectives, the Modified Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Furthermore, the Modified Project would comply with plans, programs, and regulations that reduce GHG emissions. Therefore, impacts with respect to GHG emissions under the Modified Project would be less than significant and not cumulatively considerable. No mitigation measures are required.

# MEMORANDUM

**Table 7**  
**Consistency with Applicable Conservation Goals of the City of Malibu General Plan**

Objective	Policy	Consistency Analysis
<b>Energy Conservation</b>		
<p>Objective 3.1: Use of innovative, energy-efficient techniques and systems.</p>	<p>Policy 3.1.1: The City shall educate the community regarding the importance of and techniques for energy conservation.</p> <p>Policy 3.1.2: The City shall encourage state-of-the-art energy efficiency standards for all new construction design.</p> <p>Policy 3.1.3: The City shall protect solar access.</p> <p>Policy 3.1.4: The City shall encourage uses of solar and other nonpolluting, renewable energy sources.</p>	<p><b>Not Applicable.</b> While this policy applies to the City and not directly to the Modified Project, the Modified Project would comply with applicable portions of the municipal code (Chapter 15.18 incorporates by reference the Title 24 2016 standards) by exceeding Title 24 2016 energy efficiency requirements by 14 percent and incorporating energy-efficient design methods and technologies, such as high-performance window glazing; undergrounding parking to reduce heat island effects; and enhanced insulation to minimize solar heat gain. The Modified Project is not currently anticipated to include solar roofing materials or photovoltaic cells. However, the Modified Project would make design provisions to allow for future installation of photovoltaic panels to reduce utility provided power. Thus, the Modified Project would be considered “solar-ready” and protect solar access.</p>
<b>Water Conservation</b>		
<p>Objective 4.1: Ten percent reduction in the amount of water for residential and commercial uses by 2001 and a three-day emergency water supply in all residential areas.</p>	<p>Policy 4.1.3: The City shall encourage water conservation design measures in residential, commercial, and industrial development.</p> <p>Policy 4.1.4: The City shall promote the use of water-efficient low-flow fixtures.</p> <p>Policy 4.1.5: The City shall encourage the use of drought-resistant landscaping.</p> <p>Policy 4.1.6: The City shall promote the use of reclaimed water that has had pathogens removed for appropriate uses such as landscape irrigation systems.</p> <p>Policy 4.1.7: The City shall promote the use of greywater systems.</p>	<p><b>Consistent.</b> While this policy applies to the City and does not directly apply to the Modified Project, the Modified Project would comply with applicable provisions of the municipal code (Chapters 9.22 and 15.24). As shown in Attachment B of this memorandum, implementation of applicable provisions of the municipal code such as high-efficiency fixtures and appliances, weather-based irrigation systems, drought-tolerant landscaping, and reclaimed water for irrigation would result in an overall reduction in GHG emissions from water usage by 38 percent as compared to CalEEMod default water consumption rates</p>
<b>Solid Waste</b>		
<p>Objective 5.1: Fifty percent reduction in the amount of solid waste generated by</p>	<p>Policy 5.1.1: The City shall reduce solid waste.</p> <p>Policy 5.1.2: The City shall encourage recycling.</p>	<p><b>Consistent.</b> While this action applies to the City and does not apply to the Modified Project, the Modified Project would provide adequate storage areas in accordance with the City of</p>

**Table 7 (Continued)**  
**Consistency with Applicable Conservation Goals of the City of Malibu General Plan**

Objective	Policy	Consistency Analysis
<p>the community and dispose of in landfills by 2000.</p>	<p>Policy 5.1.3: The City shall encourage co-composting.</p>	<p>Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that developments include a recycling area of specified size on the Project Site. In addition, the Modified Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material.</p> <p><b>Consistent.</b> While this policy applies to the City and does not apply to the Modified Project, the Modified Project would help the City reduce solid waste generation by 75-percent consistent with AB 341 by providing recycling bins at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. Further, the Modified Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous construction debris.</p>
<p>Source: Eystone Environmental, 2019.</p>		

# **La Paz Modified Project**

## **Attachments for Air Quality and Greenhouse Gas Emissions**

- Attachment A: Air Quality Modeling Output Files
- Attachment B: Greenhouse Gas Worksheets and Modeling Output Files

# La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment A

Air Quality Modeling Output Files

- Attachment A:
  - CalEEMod Output – Construction
  - CalEEMod Output – Operations

La Paz Ranch Construction - Los Angeles-South Coast County, Winter

**La Paz Ranch Construction**  
**Los Angeles-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	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

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

- Project Characteristics -
- Land Use -
- Construction Phase - Site Specific
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Grading -
- Construction Off-road Equipment Mitigation -
- Trips and VMT - Export to Calabasas Landfill (10.8 mile one-way distance)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	109.00
tblConstructionPhase	NumDays	230.00	114.00
tblConstructionPhase	NumDays	8.00	70.00
tblConstructionPhase	NumDays	18.00	22.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	PhaseEndDate	3/11/2020	9/30/2020
tblConstructionPhase	PhaseEndDate	1/21/2020	4/30/2020
tblConstructionPhase	PhaseEndDate	3/5/2019	7/5/2019
tblConstructionPhase	PhaseEndDate	2/14/2020	9/30/2020
tblConstructionPhase	PhaseEndDate	2/21/2019	11/22/2019
tblConstructionPhase	PhaseStartDate	2/15/2020	5/1/2020
tblConstructionPhase	PhaseStartDate	3/6/2019	11/23/2019
tblConstructionPhase	PhaseStartDate	2/22/2019	4/1/2019
tblConstructionPhase	PhaseStartDate	1/22/2020	9/1/2020
tblConstructionPhase	PhaseStartDate	2/15/2019	7/6/2019

tblGrading	MaterialExported	0.00	24,843.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	21.60
tblTripsAndVMT	HaulingTripNumber	0.00	809.00
tblTripsAndVMT	HaulingTripNumber	3,105.00	1,775.00
tblTripsAndVMT	WorkerTripNumber	5.00	34.00
tblTripsAndVMT	WorkerTripNumber	8.00	34.00
tblTripsAndVMT	WorkerTripNumber	43.00	54.00

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9777	35.2747	15.2093	0.0474	12.9431	1.3413	14.2844	6.8586	1.2351	8.0937	0.0000	4,897.3022	4,897.3022	0.8752	0.0000	4,919.1829
2020	12.1163	11.3130	8.7895	0.0220	0.7380	0.4904	1.2285	0.1988	0.4586	0.6573	0.0000	2,156.3304	2,156.3304	0.3412	0.0000	2,164.8613
<b>Maximum</b>	<b>12.1163</b>	<b>35.2747</b>	<b>15.2093</b>	<b>0.0474</b>	<b>12.9431</b>	<b>1.3413</b>	<b>14.2844</b>	<b>6.8586</b>	<b>1.2351</b>	<b>8.0937</b>	<b>0.0000</b>	<b>4,897.3022</b>	<b>4,897.3022</b>	<b>0.8752</b>	<b>0.0000</b>	<b>4,919.1829</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9777	35.2747	15.2093	0.0474	5.5717	1.3413	6.9130	2.8164	1.2351	4.0515	0.0000	4,897.3022	4,897.3022	0.8752	0.0000	4,919.1829
2020	12.1163	11.3130	8.7895	0.0220	0.7380	0.4904	1.2285	0.1988	0.4586	0.6573	0.0000	2,156.3304	2,156.3304	0.3412	0.0000	2,164.8613
<b>Maximum</b>	<b>12.1163</b>	<b>35.2747</b>	<b>15.2093</b>	<b>0.0474</b>	<b>5.5717</b>	<b>1.3413</b>	<b>6.9130</b>	<b>2.8164</b>	<b>1.2351</b>	<b>4.0515</b>	<b>0.0000</b>	<b>4,897.3022</b>	<b>4,897.3022</b>	<b>0.8752</b>	<b>0.0000</b>	<b>4,919.1829</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
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	-----------	-----------	-----	-----	------

Percent Reduction	0.00	0.00	0.00	0.00	53.88	0.00	47.52	57.28	0.00	46.19	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	4/1/2019	7/5/2019	5	70	
2	Foundation	Site Preparation	7/6/2019	11/22/2019	5	100	
3	Building Construction	Building Construction	11/23/2019	4/30/2020	5	114	
4	Architectural Coating	Architectural Coating	5/1/2020	9/30/2020	5	109	
5	Paving	Paving	9/1/2020	9/30/2020	5	22	

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: 196,410; Non-Residential Outdoor: 65,470; Striped Parking Area: 0

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Foundation	Welders	1	8.00	46	0.45
Foundation	Pumps	1	8.00	84	0.74
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	6.00	80	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	1	6.00	132	0.36
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

#### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Foundation	2	34.00	0.00	809.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	34.00	0.00	1,775.00	14.70	6.90	21.60	LD_Mix	HDT_Mix	HHDT
Building Construction	4	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

**3.2 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					12.0843	0.0000	12.0843	6.6265	0.0000	6.6265			0.0000				0.0000
Off-Road	2.5299	26.8307	11.8314	0.0222		1.3068	1.3068		1.2023	1.2023		2,201.9825	2,201.9825	0.6967			2,219.3996
<b>Total</b>	<b>2.5299</b>	<b>26.8307</b>	<b>11.8314</b>	<b>0.0222</b>	<b>12.0843</b>	<b>1.3068</b>	<b>13.3911</b>	<b>6.6265</b>	<b>1.2023</b>	<b>7.8288</b>		<b>2,201.9825</b>	<b>2,201.9825</b>	<b>0.6967</b>			<b>2,219.3996</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.2595	8.3057	1.8734	0.0213	0.4788	0.0312	0.5100	0.1312	0.0298	0.1611		2,306.9952	2,306.9952	0.1652			2,311.1248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134			388.6585
<b>Total</b>	<b>0.4478</b>	<b>8.4440</b>	<b>3.3779</b>	<b>0.0252</b>	<b>0.8588</b>	<b>0.0345</b>	<b>0.8933</b>	<b>0.2320</b>	<b>0.0329</b>	<b>0.2649</b>		<b>2,695.3197</b>	<b>2,695.3197</b>	<b>0.1786</b>			<b>2,699.7833</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					4.7129	0.0000	4.7129	2.5844	0.0000	2.5844			0.0000				0.0000
Off-Road	2.5299	26.8307	11.8314	0.0222		1.3068	1.3068		1.2023	1.2023	0.0000	2,201.9825	2,201.9825	0.6967			2,219.3996
<b>Total</b>	<b>2.5299</b>	<b>26.8307</b>	<b>11.8314</b>	<b>0.0222</b>	<b>4.7129</b>	<b>1.3068</b>	<b>6.0197</b>	<b>2.5844</b>	<b>1.2023</b>	<b>3.7866</b>	<b>0.0000</b>	<b>2,201.9825</b>	<b>2,201.9825</b>	<b>0.6967</b>			<b>2,219.3996</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.2595	8.3057	1.8734	0.0213	0.4788	0.0312	0.5100	0.1312	0.0298	0.1611		2,306.9952	2,306.9952	0.1652			2,311.1248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134			388.6585

Total	0.4478	8.4440	3.3779	0.0252	0.8588	0.0345	0.8933	0.2320	0.0329	0.2649		2,695.3197	2,695.3197	0.1786		2,699.7833
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--	------------	------------	--------	--	------------

### 3.3 Foundation - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8555	5.4581	5.5884	9.1300e-003		0.3376	0.3376		0.3376	0.3376		830.5123	830.5123	0.0763		832.4209
<b>Total</b>	<b>0.8555</b>	<b>5.4581</b>	<b>5.5884</b>	<b>9.1300e-003</b>	<b>0.0000</b>	<b>0.3376</b>	<b>0.3376</b>	<b>0.0000</b>	<b>0.3376</b>	<b>0.3376</b>		<b>830.5123</b>	<b>830.5123</b>	<b>0.0763</b>		<b>832.4209</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0779	2.5109	0.5640	6.3500e-003	0.1414	9.2600e-003	0.1507	0.0388	8.8600e-003	0.0476		687.5284	687.5284	0.0500		688.7784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585
<b>Total</b>	<b>0.2662</b>	<b>2.6491</b>	<b>2.0684</b>	<b>0.0103</b>	<b>0.5215</b>	<b>0.0125</b>	<b>0.5340</b>	<b>0.1396</b>	<b>0.0119</b>	<b>0.1514</b>		<b>1,075.8529</b>	<b>1,075.8529</b>	<b>0.0634</b>		<b>1,077.4369</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8555	5.4581	5.5884	9.1300e-003		0.3376	0.3376		0.3376	0.3376	0.0000	830.5123	830.5123	0.0763		832.4209
<b>Total</b>	<b>0.8555</b>	<b>5.4581</b>	<b>5.5884</b>	<b>9.1300e-003</b>	<b>0.0000</b>	<b>0.3376</b>	<b>0.3376</b>	<b>0.0000</b>	<b>0.3376</b>	<b>0.3376</b>	<b>0.0000</b>	<b>830.5123</b>	<b>830.5123</b>	<b>0.0763</b>		<b>832.4209</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0779	2.5109	0.5640	6.3500e-003	0.1414	9.2600e-003	0.1507	0.0388	8.8600e-003	0.0476		687.5284	687.5284	0.0500		688.7784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585

Total	0.2662	2.6491	2.0684	0.0103	0.5215	0.0125	0.5340	0.1396	0.0119	0.1514		1,075.8529	1,075.8529	0.0634		1,077.4369
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--	------------	------------	--------	--	------------

### 3.4 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1461	9.7370	6.2020	0.0107		0.5438	0.5438		0.5082	0.5082		1,009.9278	1,009.9278	0.2886		1,017.1420
<b>Total</b>	<b>1.1461</b>	<b>9.7370</b>	<b>6.2020</b>	<b>0.0107</b>		<b>0.5438</b>	<b>0.5438</b>		<b>0.5082</b>	<b>0.5082</b>		<b>1,009.9278</b>	<b>1,009.9278</b>	<b>0.2886</b>		<b>1,017.1420</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0910	2.4336	0.7108	5.3400e-003	0.1344	0.0158	0.1502	0.0387	0.0151	0.0538		569.6819	569.6819	0.0400		570.6824
Worker	0.2990	0.2196	2.3894	6.2000e-003	0.6036	5.2000e-003	0.6088	0.1601	4.8000e-003	0.1649		616.7506	616.7506	0.0212		617.2811
<b>Total</b>	<b>0.3901</b>	<b>2.6531</b>	<b>3.1002</b>	<b>0.0115</b>	<b>0.7380</b>	<b>0.0210</b>	<b>0.7590</b>	<b>0.1988</b>	<b>0.0199</b>	<b>0.2186</b>		<b>1,186.4326</b>	<b>1,186.4326</b>	<b>0.0612</b>		<b>1,187.9635</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1461	9.7370	6.2020	0.0107		0.5438	0.5438		0.5082	0.5082	0.0000	1,009.9278	1,009.9278	0.2886		1,017.1420
<b>Total</b>	<b>1.1461</b>	<b>9.7370</b>	<b>6.2020</b>	<b>0.0107</b>		<b>0.5438</b>	<b>0.5438</b>		<b>0.5082</b>	<b>0.5082</b>	<b>0.0000</b>	<b>1,009.9278</b>	<b>1,009.9278</b>	<b>0.2886</b>		<b>1,017.1420</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0910	2.4336	0.7108	5.3400e-003	0.1344	0.0158	0.1502	0.0387	0.0151	0.0538		569.6819	569.6819	0.0400		570.6824
Worker	0.2990	0.2196	2.3894	6.2000e-003	0.6036	5.2000e-003	0.6088	0.1601	4.8000e-003	0.1649		616.7506	616.7506	0.0212		617.2811

Total	0.3901	2.6531	3.1002	0.0115	0.7380	0.0210	0.7590	0.1988	0.0199	0.2186		1,186.4326	1,186.4326	0.0612		1,187.9635
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--	------------	------------	--------	--	------------

### 3.4 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0268	8.8839	5.9785	0.0107		0.4747	0.4747		0.4437	0.4437		992.4803	992.4803	0.2846		999.5941
<b>Total</b>	<b>1.0268</b>	<b>8.8839</b>	<b>5.9785</b>	<b>0.0107</b>		<b>0.4747</b>	<b>0.4747</b>		<b>0.4437</b>	<b>0.4437</b>		<b>992.4803</b>	<b>992.4803</b>	<b>0.2846</b>		<b>999.5941</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1344	0.0107	0.1451	0.0387	0.0102	0.0489		565.8430	565.8430	0.0378		566.7890
Worker	0.2760	0.1957	2.1655	6.0000e-003	0.6036	5.0500e-003	0.6086	0.1601	4.6500e-003	0.1647		598.0070	598.0070	0.0189		598.4782
<b>Total</b>	<b>0.3540</b>	<b>2.4291</b>	<b>2.8110</b>	<b>0.0113</b>	<b>0.7380</b>	<b>0.0157</b>	<b>0.7538</b>	<b>0.1988</b>	<b>0.0149</b>	<b>0.2137</b>		<b>1,163.8501</b>	<b>1,163.8501</b>	<b>0.0567</b>		<b>1,165.2672</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0268	8.8839	5.9785	0.0107		0.4747	0.4747		0.4437	0.4437	0.0000	992.4803	992.4803	0.2846		999.5941
<b>Total</b>	<b>1.0268</b>	<b>8.8839</b>	<b>5.9785</b>	<b>0.0107</b>		<b>0.4747</b>	<b>0.4747</b>		<b>0.4437</b>	<b>0.4437</b>	<b>0.0000</b>	<b>992.4803</b>	<b>992.4803</b>	<b>0.2846</b>		<b>999.5941</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1344	0.0107	0.1451	0.0387	0.0102	0.0489		565.8430	565.8430	0.0378		566.7890
Worker	0.2760	0.1957	2.1655	6.0000e-003	0.6036	5.0500e-003	0.6086	0.1601	4.6500e-003	0.1647		598.0070	598.0070	0.0189		598.4782

Total	0.3540	2.4291	2.8110	0.0113	0.7380	0.0157	0.7538	0.1988	0.0149	0.2137		1,163.8501	1,163.8501	0.0567		1,165.2672
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--	------------	------------	--------	--	------------

### 3.5 Architectural Coating - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.1359					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856
<b>Total</b>	<b>11.6203</b>	<b>3.3677</b>	<b>3.6628</b>	<b>5.9400e-003</b>		<b>0.2219</b>	<b>0.2219</b>		<b>0.2219</b>	<b>0.2219</b>		<b>562.8961</b>	<b>562.8961</b>	<b>0.0436</b>		<b>563.9856</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0460	0.0326	0.3609	1.0000e-003	0.1006	8.4000e-004	0.1014	0.0267	7.7000e-004	0.0275		99.6678	99.6678	3.1400e-003		99.7464
<b>Total</b>	<b>0.0460</b>	<b>0.0326</b>	<b>0.3609</b>	<b>1.0000e-003</b>	<b>0.1006</b>	<b>8.4000e-004</b>	<b>0.1014</b>	<b>0.0267</b>	<b>7.7000e-004</b>	<b>0.0275</b>		<b>99.6678</b>	<b>99.6678</b>	<b>3.1400e-003</b>		<b>99.7464</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.1359					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856
<b>Total</b>	<b>11.6203</b>	<b>3.3677</b>	<b>3.6628</b>	<b>5.9400e-003</b>		<b>0.2219</b>	<b>0.2219</b>		<b>0.2219</b>	<b>0.2219</b>	<b>0.0000</b>	<b>562.8961</b>	<b>562.8961</b>	<b>0.0436</b>		<b>563.9856</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0460	0.0326	0.3609	1.0000e-003	0.1006	8.4000e-004	0.1014	0.0267	7.7000e-004	0.0275		99.6678	99.6678	3.1400e-003		99.7464

Total	0.0460	0.0326	0.3609	1.0000e-003	0.1006	8.4000e-004	0.1014	0.0267	7.7000e-004	0.0275		99.6678	99.6678	3.1400e-003		99.7464
-------	--------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--	---------	---------	-------------	--	---------

### 3.6 Paving - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4092	3.9873	4.4118	6.6900e-003		0.2242	0.2242		0.2071	0.2071		634.5519	634.5519	0.1969		639.4746
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.4092</b>	<b>3.9873</b>	<b>4.4118</b>	<b>6.6900e-003</b>		<b>0.2242</b>	<b>0.2242</b>		<b>0.2071</b>	<b>0.2071</b>		<b>634.5519</b>	<b>634.5519</b>	<b>0.1969</b>		<b>639.4746</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
<b>Total</b>	<b>0.0409</b>	<b>0.0290</b>	<b>0.3208</b>	<b>8.9000e-004</b>	<b>0.0894</b>	<b>7.5000e-004</b>	<b>0.0902</b>	<b>0.0237</b>	<b>6.9000e-004</b>	<b>0.0244</b>		<b>88.5936</b>	<b>88.5936</b>	<b>2.7900e-003</b>		<b>88.6634</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4092	3.9873	4.4118	6.6900e-003		0.2242	0.2242		0.2071	0.2071	0.0000	634.5519	634.5519	0.1969		639.4746
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.4092</b>	<b>3.9873</b>	<b>4.4118</b>	<b>6.6900e-003</b>		<b>0.2242</b>	<b>0.2242</b>		<b>0.2071</b>	<b>0.2071</b>	<b>0.0000</b>	<b>634.5519</b>	<b>634.5519</b>	<b>0.1969</b>		<b>639.4746</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634

Total	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
-------	--------	--------	--------	-------------	--------	-------------	--------	--------	-------------	--------	--	---------	---------	-------------	--	---------



Category	lb/day										lb/day							
Area	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005								0.0308
Energy	0.0210	0.1909	0.1604	1.1500e-003		0.0145	0.0145		0.0145	0.0145								230.4559
Mobile	6.0244	28.1259	69.8810	0.2283	18.5610	0.2018	18.7628	4.9674	0.1884	5.1558								23,261.0205
<b>Total</b>	<b>8.9968</b>	<b>28.3169</b>	<b>70.0549</b>	<b>0.2294</b>	<b>18.5610</b>	<b>0.2164</b>	<b>18.7774</b>	<b>4.9674</b>	<b>0.2030</b>	<b>5.1704</b>								<b>23,491.5072</b>

### Mitigated Operational

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	
Category	lb/day										lb/day						
Area	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005							0.0308
Energy	0.0185	0.1682	0.1413	1.0100e-003		0.0128	0.0128		0.0128	0.0128							203.0666
Mobile	5.7861	26.5116	64.1461	0.2053	16.5542	0.1826	16.7369	4.4304	0.1705	4.6008							20,926.4839
<b>Total</b>	<b>8.7560</b>	<b>26.6800</b>	<b>64.3010</b>	<b>0.2063</b>	<b>16.5542</b>	<b>0.1954</b>	<b>16.7497</b>	<b>4.4304</b>	<b>0.1833</b>	<b>4.6137</b>							<b>21,129.5812</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>2.68</b>	<b>5.78</b>	<b>8.21</b>	<b>10.06</b>	<b>10.81</b>	<b>9.68</b>	<b>10.80</b>	<b>10.81</b>	<b>9.70</b>	<b>10.77</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.05</b>

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

- Increase Density
- Increase Diversity
- Improve Pedestrian Network

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
Category	lb/day										lb/day					
Mitigated	5.7861	26.5116	64.1461	0.2053	16.5542	0.1826	16.7369	4.4304	0.1705	4.6008						20,926.4839
Unmitigated	6.0244	28.1259	69.8810	0.2283	18.5610	0.2018	18.7628	4.9674	0.1884	5.1558						23,261.0205

### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Office Building	609.33	138.26	58.81	1,492,796	1,331,400
Regional Shopping Center	2,358.83	3,128.20	1579.74	5,098,775	4,547,514
<b>Total</b>	<b>2,968.16</b>	<b>3,266.45</b>	<b>1,638.54</b>	<b>6,591,570</b>	<b>5,878,914</b>

### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

#### 5.0 Energy Detail

Historical Energy Use: N

#### 5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
NaturalGas Mitigated	0.0185	0.1682	0.1413	1.0100e-003		0.0128	0.0128		0.0128	0.0128							203.0666
NaturalGas Unmitigated	0.0210	0.1909	0.1604	1.1500e-003		0.0145	0.0145		0.0145	0.0145							230.4559

#### 5.2 Energy by Land Use - NaturalGas

##### Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1566.47	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117						185.3858
Regional Shopping Center	380.833	4.1100e-003	0.0373	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003						45.0701
<b>Total</b>		<b>0.0210</b>	<b>0.1909</b>	<b>0.1604</b>	<b>1.1400e-003</b>		<b>0.0145</b>	<b>0.0145</b>		<b>0.0145</b>	<b>0.0145</b>						<b>230.4559</b>

##### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1.36036	0.0147	0.1334	0.1120	8.0000e-004		0.0101	0.0101		0.0101	0.0101						160.9936
Regional Shopping Center	0.355507	3.8300e-003	0.0349	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						42.0730
<b>Total</b>		<b>0.0185</b>	<b>0.1682</b>	<b>0.1413</b>	<b>1.0100e-003</b>		<b>0.0128</b>	<b>0.0128</b>		<b>0.0128</b>	<b>0.0128</b>						<b>203.0666</b>

#### 6.0 Area Detail



# La Paz Modified Project

## Attachments for Air Quality and Greenhouse Gas Emissions

### Attachment B

## Greenhouse Gas Worksheets and Modeling Output Files

- Attachment B-1: GHG Modeling Parameters and Summary of Emissions
  - GHG Parameters and Summary
    - Land Use and Site Enhancement
    - Trip Generation
  - EV Charger Calculation
  - Linscott, Law & Greenspan Project Trip Generation Table
  
- Appendix B-2: CalEEMod Outputs
  - Construction Annual
  - Modified Project No Project Design Features
  - Modified Project With Project Design Features

# La Paz Modified Project

## Attachments for Air Quality and Greenhouse Gas Emissions

### Attachment B-1

## Greenhouse Gas Worksheets and Modeling Output Files

- Attachment B-1: GHG Modeling Parameters and Summary of Emissions
  - GHG Parameters and Summary
    - Land Use and Site Enhancement
    - Trip Generation
  - EV Charger Calculation
  - Linscott, Law & Greenspan Project Trip Generation Table



La Paz Modified Project  
Electric Vehicle (EV) Modeling Parameters

**GHG Emissions Reductions for Commercial Uses Associated with PDF GHG-2 (Electric Vehicle Charging Stations/Plugins)**

**Step 1: Estimating GHG Emissions Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle**

LADWP Electricity Emission Factor (MTCO <sub>2</sub> E/MWh) <sup>1</sup>	0.32
Fuel Economy of Electric Vehicle (kWh/mile) <sup>2</sup>	0.25
Gasoline/Diesel CO <sub>2</sub> Emissions While Running (grams/mile) <sup>3</sup>	313.8
Annual VMT Reduction per Parking Spot (miles/charging station/year) <sup>4</sup>	45,625
Number of On-Site Chargers	32
Annual VMT Reduction All Stations/Plugins (Based on Charge)	1,460,000

**Step 2: Estimating GHG Emissions Reduction from Installing Electric Vehicle Charging Stations/Plugins**

GHG Emissions of Gasoline/Diesel Vehicle (MTCO <sub>2</sub> E/MWh)	458
GHG Emissions of Electric Vehicle (MTCO <sub>2</sub> E/MWh)	117
GHG Emissions Reduction (MTCO <sub>2</sub> E/MWh)	<b>341</b>

Notes:

- 1) CO<sub>2</sub> intensity factor reflects a 2021 RPS for SCE (702.44 lbs of CO<sub>2</sub>E/MWh).
- 2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel (kWh/mile). Available at: [http://afdc.energy.gov/fuels/electricity\\_benefits.html](http://afdc.energy.gov/fuels/electricity_benefits.html).
- 3) CARB, 2017. EMFAC2017, running exhaust emission rate for CO<sub>2</sub> and CH<sub>4</sub> for light duty gasoline- and diesel-powered vehicles in Los Angeles, aggregated for all models and speeds, averaged over all seasons for 2021.
- 4) Annual VMT reduction estimated based on an estimate of 10 hours of charge time for a Level 2 charging station that charges at a rate of 25 driving range per hour. It is conservatively assumed that 50% of the miles charged would be driven by the charged vehicles.

Table 1  
PROJECT TRIP GENERATION [1]

10-Jan-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL
<b>Proposed Modified Project</b>												
Office [3]	62,556 GSF	609	63	10	73	12	60	72	138	28	5	33
Shopping Center [4]	69,502 GSF	<u>2,624</u>	<u>40</u>	<u>25</u>	<u>65</u>	<u>127</u>	<u>138</u>	<u>265</u>	<u>3,205</u>	<u>163</u>	<u>150</u>	<u>313</u>
<b>Subtotal</b>		3,233	103	35	138	139	198	337	3,343	191	155	346
<b>Internal Capture [5], [6]</b>		(265)	(6)	(6)	(12)	(13)	(13)	(26)	(77)	(4)	(4)	(8)
<b>SUBTOTAL DRIVEWAY TRIPS</b>		<b>2,968</b>	<b>97</b>	<b>29</b>	<b>126</b>	<b>126</b>	<b>185</b>	<b>311</b>	<b>3,266</b>	<b>187</b>	<b>151</b>	<b>338</b>
<b>Pass-By Adjustment [7], [8]</b>												
Shopping Center		(262)	0	0	0	(25)	(28)	(53)	(801)	(41)	(37)	(78)
<b>NET INCREASE "OFF-SITE" TRIPS</b>		<b>2,706</b>	<b>97</b>	<b>29</b>	<b>126</b>	<b>101</b>	<b>157</b>	<b>258</b>	<b>2,465</b>	<b>146</b>	<b>114</b>	<b>260</b>

[1] Source: ITE "Trip Generation," 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 710 (General Office Building) trip generation average rates.

- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound

- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound

- PM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound

- Saturday Trip Rate: 2.21 trips/1,000 SF of floor area; 50% inbound/50% outbound

- Saturday Peak Hour Trip Rate: 0.53 trips/1,000 SF of floor area; 54% inbound/46% outbound

[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

- Daily Trip Rate: 37.75 trips/1,000 SF of floor area; 50% inbound/50% outbound

- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of floor area; 62% inbound/38% outbound

- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of floor area; 48% inbound/52% outbound

- Saturday Trip Rate: 46.12 trips/1,000 SF of floor area; 50% inbound/50% outbound

- Saturday Peak Hour Trip Rate: 4.50 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] Peak hour internal capture reduction based on synergy between the shopping center and office uses calculated using NCHRP 684 internal trip capture estimation tool (see attached worksheets). PM peak hour calculation used to determine Saturday MD peak hour internal capture.

[6] Weekday daily internal capture assumed to be average of calculated AM peak hour and PM peak hour internal capture (i.e., 8.2%).

Saturday daily internal capture assumed to be equivalent to the calculated MD peak hour internal capture (i.e., 2.3%).

[7] Weekday PM peak hour and Saturday MD peak hour pass-by trip adjustment per City direction (20% for weekday PM peak hour and 25% for Saturday MD peak hour).

[8] Weekday daily pass-by assumed to be average of applied AM peak hour pass-by and PM peak hour pass-by (i.e., 10%).

Saturday daily pass-by assumed to be average of applied MD peak hour pass-by (i.e., 25%).

# **La Paz Modified Project**

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment B-2

Greenhouse Gas Worksheets and Modeling Output Files

- Appendix B-2: CalEEMod Outputs
  - Construction Annual
  - Modified Project No Project Design Features
  - Modified Project With Project Design Features

La Paz Ranch Construction - Los Angeles-South Coast County, Annual

**La Paz Ranch Construction**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2020
<b>Utility Company</b>	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

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

- Project Characteristics -
- Land Use -
- Construction Phase - Site Specific
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Off-road Equipment - Site Specific Consistent with Approved Project EIR
- Trips and VMT - Export to Calabasas Landfill (10.8 mile one-way distance)
- Grading -
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	70.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	NumDays	230.00	114.00
tblConstructionPhase	NumDays	18.00	109.00
tblConstructionPhase	NumDays	18.00	22.00
tblGrading	MaterialExported	0.00	24,843.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	21.60
tblTripsAndVMT	HaulingTripNumber	3,105.00	1,775.00
tblTripsAndVMT	HaulingTripNumber	0.00	809.00
tblTripsAndVMT	WorkerTripNumber	8.00	34.00
tblTripsAndVMT	WorkerTripNumber	5.00	34.00
tblTripsAndVMT	WorkerTripNumber	43.00	54.00

## 2.0 Emissions Summary

### 2.1 Overall Construction

#### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1789	1.8164	1.0413	2.9500e-003	0.4878	0.0721	0.5599	0.2494	0.0678	0.3172	0.0000	270.5995	270.5995	0.0383	0.0000	271.5561
2020	0.6993	0.7237	0.6555	1.4300e-003	0.0378	0.0359	0.0738	0.0102	0.0344	0.0445	0.0000	125.9222	125.9222	0.0177	0.0000	126.3656
<b>Maximum</b>	<b>0.6993</b>	<b>1.8164</b>	<b>1.0413</b>	<b>2.9500e-003</b>	<b>0.4878</b>	<b>0.0721</b>	<b>0.5599</b>	<b>0.2494</b>	<b>0.0678</b>	<b>0.3172</b>	<b>0.0000</b>	<b>270.5995</b>	<b>270.5995</b>	<b>0.0383</b>	<b>0.0000</b>	<b>271.5561</b>

#### Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1789	1.8164	1.0413	2.9500e-003	0.2298	0.0721	0.3019	0.1079	0.0678	0.1758	0.0000	270.5993	270.5993	0.0383	0.0000	271.5560
2020	0.6993	0.7237	0.6555	1.4300e-003	0.0378	0.0359	0.0738	0.0102	0.0344	0.0445	0.0000	125.9222	125.9222	0.0177	0.0000	126.3655
<b>Maximum</b>	<b>0.6993</b>	<b>1.8164</b>	<b>1.0413</b>	<b>2.9500e-003</b>	<b>0.2298</b>	<b>0.0721</b>	<b>0.3019</b>	<b>0.1079</b>	<b>0.0678</b>	<b>0.1758</b>	<b>0.0000</b>	<b>270.5993</b>	<b>270.5993</b>	<b>0.0383</b>	<b>0.0000</b>	<b>271.5560</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>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>49.08</b>	<b>0.00</b>	<b>40.72</b>	<b>54.50</b>	<b>0.00</b>	<b>39.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-18-2019	4-17-2019	0.2313	0.2313
2	4-18-2019	7-17-2019	1.1141	1.1141
3	7-18-2019	10-17-2019	0.3014	0.3014
4	10-18-2019	1-17-2020	0.3897	0.3897
5	1-18-2020	4-17-2020	0.4123	0.4123
6	4-18-2020	7-17-2020	0.4782	0.4782
7	7-18-2020	9-30-2020	0.4511	0.4511
		<b>Highest</b>	<b>1.1141</b>	<b>1.1141</b>

### 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	4/1/2019	7/5/2019	5	70	
2	Foundation	Site Preparation	7/6/2019	11/22/2019	5	100	
3	Building Construction	Building Construction	11/23/2019	4/30/2020	5	114	
4	Architectural Coating	Architectural Coating	5/1/2020	9/30/2020	5	109	
5	Paving	Paving	9/1/2020	9/30/2020	5	22	

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: 196,410; Non-Residential Outdoor: 65,470; Striped Parking Area:

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation	Pumps	1	8.00	84	0.74
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Foundation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation	Welders	1	8.00	46	0.45
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	0	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

#### 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	3	34.00	0.00	1,775.00	14.70	6.90	21.60	LD_Mix	HDT_Mix	HHDT
Foundation	2	34.00	0.00	809.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

Water Exposed Area

### 3.2 Grading - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4230	0.0000	0.4230	0.2319	0.0000	0.2319	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0886	0.9391	0.4141	7.8000e-004		0.0457	0.0457		0.0421	0.0421	0.0000	69.9162	69.9162	0.0221	0.0000	70.4692
<b>Total</b>	<b>0.0886</b>	<b>0.9391</b>	<b>0.4141</b>	<b>7.8000e-004</b>	<b>0.4230</b>	<b>0.0457</b>	<b>0.4687</b>	<b>0.2319</b>	<b>0.0421</b>	<b>0.2740</b>	<b>0.0000</b>	<b>69.9162</b>	<b>69.9162</b>	<b>0.0221</b>	<b>0.0000</b>	<b>70.4692</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.9600e-003	0.2964	0.0634	7.5000e-004	0.0165	1.0800e-003	0.0176	4.5200e-003	1.0300e-003	5.5600e-003	0.0000	73.9352	73.9352	5.1400e-003	0.0000	74.0637
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	5.9600e-003	4.9700e-003	0.0540	1.4000e-004	0.0130	1.1000e-004	0.0132	3.4600e-003	1.1000e-004	3.5700e-003	0.0000	12.5350	12.5350	4.3000e-004	0.0000	12.5457
<b>Total</b>	<b>0.0149</b>	<b>0.3014</b>	<b>0.1174</b>	<b>8.9000e-004</b>	<b>0.0295</b>	<b>1.1900e-003</b>	<b>0.0307</b>	<b>7.9800e-003</b>	<b>1.1400e-003</b>	<b>9.1300e-003</b>	<b>0.0000</b>	<b>86.4701</b>	<b>86.4701</b>	<b>5.5700e-003</b>	<b>0.0000</b>	<b>86.6095</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1650	0.0000	0.1650	0.0905	0.0000	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0886	0.9391	0.4141	7.8000e-004		0.0457	0.0457		0.0421	0.0421	0.0000	69.9161	69.9161	0.0221	0.0000	70.4691
<b>Total</b>	<b>0.0886</b>	<b>0.9391</b>	<b>0.4141</b>	<b>7.8000e-004</b>	<b>0.1650</b>	<b>0.0457</b>	<b>0.2107</b>	<b>0.0905</b>	<b>0.0421</b>	<b>0.1325</b>	<b>0.0000</b>	<b>69.9161</b>	<b>69.9161</b>	<b>0.0221</b>	<b>0.0000</b>	<b>70.4691</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.9600e-003	0.2964	0.0634	7.5000e-004	0.0165	1.0800e-003	0.0176	4.5200e-003	1.0300e-003	5.5600e-003	0.0000	73.9352	73.9352	5.1400e-003	0.0000	74.0637
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	5.9600e-003	4.9700e-003	0.0540	1.4000e-004	0.0130	1.1000e-004	0.0132	3.4600e-003	1.1000e-004	3.5700e-003	0.0000	12.5350	12.5350	4.3000e-004	0.0000	12.5457
<b>Total</b>	<b>0.0149</b>	<b>0.3014</b>	<b>0.1174</b>	<b>8.9000e-004</b>	<b>0.0295</b>	<b>1.1900e-003</b>	<b>0.0307</b>	<b>7.9800e-003</b>	<b>1.1400e-003</b>	<b>9.1300e-003</b>	<b>0.0000</b>	<b>86.4701</b>	<b>86.4701</b>	<b>5.5700e-003</b>	<b>0.0000</b>	<b>86.6095</b>

### 3.3 Foundation - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.2729	0.2794	4.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	37.6714	37.6714	3.4600e-003	0.0000	37.7580
<b>Total</b>	<b>0.0428</b>	<b>0.2729</b>	<b>0.2794</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>0.0169</b>	<b>0.0169</b>	<b>0.0000</b>	<b>0.0169</b>	<b>0.0169</b>	<b>0.0000</b>	<b>37.6714</b>	<b>37.6714</b>	<b>3.4600e-003</b>	<b>0.0000</b>	<b>37.7580</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8400e-003	0.1280	0.0272	3.2000e-004	6.9500e-003	4.6000e-004	7.4100e-003	1.9100e-003	4.4000e-004	2.3500e-003	0.0000	31.4978	31.4978	2.2200e-003	0.0000	31.5534
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	8.5200e-003	7.1000e-003	0.0772	2.0000e-004	0.0186	1.6000e-004	0.0188	4.9500e-003	1.5000e-004	5.1000e-003	0.0000	17.9071	17.9071	6.2000e-004	0.0000	17.9225
<b>Total</b>	<b>0.0124</b>	<b>0.1351</b>	<b>0.1044</b>	<b>5.2000e-004</b>	<b>0.0256</b>	<b>6.2000e-004</b>	<b>0.0262</b>	<b>6.8600e-003</b>	<b>5.9000e-004</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>49.4049</b>	<b>49.4049</b>	<b>2.8400e-003</b>	<b>0.0000</b>	<b>49.4758</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.2729	0.2794	4.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	37.6714	37.6714	3.4600e-003	0.0000	37.7579
<b>Total</b>	<b>0.0428</b>	<b>0.2729</b>	<b>0.2794</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>0.0169</b>	<b>0.0169</b>	<b>0.0000</b>	<b>0.0169</b>	<b>0.0169</b>	<b>0.0000</b>	<b>37.6714</b>	<b>37.6714</b>	<b>3.4600e-003</b>	<b>0.0000</b>	<b>37.7579</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8400e-003	0.1280	0.0272	3.2000e-004	6.9500e-003	4.6000e-004	7.4100e-003	1.9100e-003	4.4000e-004	2.3500e-003	0.0000	31.4978	31.4978	2.2200e-003	0.0000	31.5534
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	8.5200e-003	7.1000e-003	0.0772	2.0000e-004	0.0186	1.6000e-004	0.0188	4.9500e-003	1.5000e-004	5.1000e-003	0.0000	17.9071	17.9071	6.2000e-004	0.0000	17.9225
<b>Total</b>	<b>0.0124</b>	<b>0.1351</b>	<b>0.1044</b>	<b>5.2000e-004</b>	<b>0.0256</b>	<b>6.2000e-004</b>	<b>0.0262</b>	<b>6.8600e-003</b>	<b>5.9000e-004</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>49.4049</b>	<b>49.4049</b>	<b>2.8400e-003</b>	<b>0.0000</b>	<b>49.4758</b>

### 3.4 Building Construction - 2019

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1315	0.0837	1.4000e-004		7.3400e-003	7.3400e-003		6.8600e-003	6.8600e-003	0.0000	12.3686	12.3686	3.5300e-003	0.0000	12.4569
<b>Total</b>	<b>0.0155</b>	<b>0.1315</b>	<b>0.0837</b>	<b>1.4000e-004</b>		<b>7.3400e-003</b>	<b>7.3400e-003</b>		<b>6.8600e-003</b>	<b>6.8600e-003</b>	<b>0.0000</b>	<b>12.3686</b>	<b>12.3686</b>	<b>3.5300e-003</b>	<b>0.0000</b>	<b>12.4569</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-003	0.0335	9.1600e-003	7.0000e-005	1.7900e-003	2.1000e-004	2.0000e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	7.0893	7.0893	4.7000e-004	0.0000	7.1012
Worker	3.6500e-003	3.0400e-003	0.0331	9.0000e-005	7.9900e-003	7.0000e-005	8.0600e-003	2.1200e-003	6.0000e-005	2.1900e-003	0.0000	7.6790	7.6790	2.6000e-004	0.0000	7.6856
<b>Total</b>	<b>4.8500e-003</b>	<b>0.0365</b>	<b>0.0423</b>	<b>1.6000e-004</b>	<b>9.7800e-003</b>	<b>2.8000e-004</b>	<b>0.0101</b>	<b>2.6400e-003</b>	<b>2.6000e-004</b>	<b>2.9100e-003</b>	<b>0.0000</b>	<b>14.7683</b>	<b>14.7683</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>14.7867</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1315	0.0837	1.4000e-004		7.3400e-003	7.3400e-003		6.8600e-003	6.8600e-003	0.0000	12.3686	12.3686	3.5300e-003	0.0000	12.4569
<b>Total</b>	<b>0.0155</b>	<b>0.1315</b>	<b>0.0837</b>	<b>1.4000e-004</b>		<b>7.3400e-003</b>	<b>7.3400e-003</b>		<b>6.8600e-003</b>	<b>6.8600e-003</b>	<b>0.0000</b>	<b>12.3686</b>	<b>12.3686</b>	<b>3.5300e-003</b>	<b>0.0000</b>	<b>12.4569</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-003	0.0335	9.1600e-003	7.0000e-005	1.7900e-003	2.1000e-004	2.0000e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	7.0893	7.0893	4.7000e-004	0.0000	7.1012
Worker	3.6500e-003	3.0400e-003	0.0331	9.0000e-005	7.9900e-003	7.0000e-005	8.0600e-003	2.1200e-003	6.0000e-005	2.1900e-003	0.0000	7.6790	7.6790	2.6000e-004	0.0000	7.6856
<b>Total</b>	<b>4.8500e-003</b>	<b>0.0365</b>	<b>0.0423</b>	<b>1.6000e-004</b>	<b>9.7800e-003</b>	<b>2.8000e-004</b>	<b>0.0101</b>	<b>2.6400e-003</b>	<b>2.6000e-004</b>	<b>2.9100e-003</b>	<b>0.0000</b>	<b>14.7683</b>	<b>14.7683</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>14.7867</b>

### 3.4 Building Construction - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0447	0.3865	0.2601	4.6000e-004		0.0207	0.0207		0.0193	0.0193	0.0000	39.1658	39.1658	0.0112	0.0000	39.4465
<b>Total</b>	<b>0.0447</b>	<b>0.3865</b>	<b>0.2601</b>	<b>4.6000e-004</b>		<b>0.0207</b>	<b>0.0207</b>		<b>0.0193</b>	<b>0.0193</b>	<b>0.0000</b>	<b>39.1658</b>	<b>39.1658</b>	<b>0.0112</b>	<b>0.0000</b>	<b>39.4465</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0990	0.0268	2.3000e-004	5.7500e-003	4.6000e-004	6.2100e-003	1.6600e-003	4.4000e-004	2.1000e-003	0.0000	22.6937	22.6937	1.4400e-003	0.0000	22.7298
Worker	0.0108	8.7400e-003	0.0967	2.7000e-004	0.0257	2.2000e-004	0.0260	6.8400e-003	2.0000e-004	7.0400e-003	0.0000	23.9915	23.9915	7.6000e-004	0.0000	24.0104
<b>Total</b>	<b>0.0142</b>	<b>0.1077</b>	<b>0.1235</b>	<b>5.0000e-004</b>	<b>0.0315</b>	<b>6.8000e-004</b>	<b>0.0322</b>	<b>8.5000e-003</b>	<b>6.4000e-004</b>	<b>9.1400e-003</b>	<b>0.0000</b>	<b>46.6853</b>	<b>46.6853</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>46.7402</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0447	0.3865	0.2601	4.6000e-004		0.0207	0.0207		0.0193	0.0193	0.0000	39.1657	39.1657	0.0112	0.0000	39.4465
<b>Total</b>	<b>0.0447</b>	<b>0.3865</b>	<b>0.2601</b>	<b>4.6000e-004</b>		<b>0.0207</b>	<b>0.0207</b>		<b>0.0193</b>	<b>0.0193</b>	<b>0.0000</b>	<b>39.1657</b>	<b>39.1657</b>	<b>0.0112</b>	<b>0.0000</b>	<b>39.4465</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0990	0.0268	2.3000e-004	5.7500e-003	4.6000e-004	6.2100e-003	1.6600e-003	4.4000e-004	2.1000e-003	0.0000	22.6937	22.6937	1.4400e-003	0.0000	22.7298
Worker	0.0108	8.7400e-003	0.0967	2.7000e-004	0.0257	2.2000e-004	0.0260	6.8400e-003	2.0000e-004	7.0400e-003	0.0000	23.9915	23.9915	7.6000e-004	0.0000	24.0104
<b>Total</b>	<b>0.0142</b>	<b>0.1077</b>	<b>0.1235</b>	<b>5.0000e-004</b>	<b>0.0315</b>	<b>6.8000e-004</b>	<b>0.0322</b>	<b>8.5000e-003</b>	<b>6.4000e-004</b>	<b>9.1400e-003</b>	<b>0.0000</b>	<b>46.6853</b>	<b>46.6853</b>	<b>2.2000e-003</b>	<b>0.0000</b>	<b>46.7402</b>

### 3.5 Architectural Coating - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.1835	0.1996	3.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	27.8305	27.8305	2.1500e-003	0.0000	27.8843
<b>Total</b>	<b>0.6333</b>	<b>0.1835</b>	<b>0.1996</b>	<b>3.2000e-004</b>		<b>0.0121</b>	<b>0.0121</b>		<b>0.0121</b>	<b>0.0121</b>	<b>0.0000</b>	<b>27.8305</b>	<b>27.8305</b>	<b>2.1500e-003</b>	<b>0.0000</b>	<b>27.8843</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.8300e-003	0.0202	6.0000e-005	5.3700e-003	5.0000e-005	5.4200e-003	1.4300e-003	4.0000e-005	1.4700e-003	0.0000	5.0097	5.0097	1.6000e-004	0.0000	5.0137
<b>Total</b>	<b>2.2600e-003</b>	<b>1.8300e-003</b>	<b>0.0202</b>	<b>6.0000e-005</b>	<b>5.3700e-003</b>	<b>5.0000e-005</b>	<b>5.4200e-003</b>	<b>1.4300e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>5.0097</b>	<b>5.0097</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.0137</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.1835	0.1996	3.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	27.8304	27.8304	2.1500e-003	0.0000	27.8843
<b>Total</b>	<b>0.6333</b>	<b>0.1835</b>	<b>0.1996</b>	<b>3.2000e-004</b>		<b>0.0121</b>	<b>0.0121</b>		<b>0.0121</b>	<b>0.0121</b>	<b>0.0000</b>	<b>27.8304</b>	<b>27.8304</b>	<b>2.1500e-003</b>	<b>0.0000</b>	<b>27.8843</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.8300e-003	0.0202	6.0000e-005	5.3700e-003	5.0000e-005	5.4200e-003	1.4300e-003	4.0000e-005	1.4700e-003	0.0000	5.0097	5.0097	1.6000e-004	0.0000	5.0137
<b>Total</b>	<b>2.2600e-003</b>	<b>1.8300e-003</b>	<b>0.0202</b>	<b>6.0000e-005</b>	<b>5.3700e-003</b>	<b>5.0000e-005</b>	<b>5.4200e-003</b>	<b>1.4300e-003</b>	<b>4.0000e-005</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>5.0097</b>	<b>5.0097</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.0137</b>

### 3.6 Paving - 2020

#### Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5000e-003	0.0439	0.0485	7.0000e-005		2.4700e-003	2.4700e-003		2.2800e-003	2.2800e-003	0.0000	6.3322	6.3322	1.9600e-003	0.0000	6.3813
Paving	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>4.5000e-003</b>	<b>0.0439</b>	<b>0.0485</b>	<b>7.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>6.3322</b>	<b>6.3322</b>	<b>1.9600e-003</b>	<b>0.0000</b>	<b>6.3813</b>

#### Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.3000e-004	3.6200e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8988	0.8988	3.0000e-005	0.0000	0.8995
<b>Total</b>	<b>4.1000e-004</b>	<b>3.3000e-004</b>	<b>3.6200e-003</b>	<b>1.0000e-005</b>	<b>9.6000e-004</b>	<b>1.0000e-005</b>	<b>9.7000e-004</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.8988</b>	<b>0.8988</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8995</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5000e-003	0.0439	0.0485	7.0000e-005		2.4700e-003	2.4700e-003		2.2800e-003	2.2800e-003	0.0000	6.3322	6.3322	1.9600e-003	0.0000	6.3813
Paving	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>4.5000e-003</b>	<b>0.0439</b>	<b>0.0485</b>	<b>7.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.2800e-003</b>	<b>2.2800e-003</b>	<b>0.0000</b>	<b>6.3322</b>	<b>6.3322</b>	<b>1.9600e-003</b>	<b>0.0000</b>	<b>6.3813</b>

#### Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.3000e-004	3.6200e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8988	0.8988	3.0000e-005	0.0000	0.8995
<b>Total</b>	<b>4.1000e-004</b>	<b>3.3000e-004</b>	<b>3.6200e-003</b>	<b>1.0000e-005</b>	<b>9.6000e-004</b>	<b>1.0000e-005</b>	<b>9.7000e-004</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.8988</b>	<b>0.8988</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8995</b>

La Paz Ranch (Modified Project No PDFs) - Los Angeles-South Coast County, Annual

**La Paz Ranch (Modified Project No PDFs)**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	8			<b>Operational Year</b>	2021
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

- Project Characteristics -
- Land Use - Project Specific Acreage
- Construction Phase -
- Vehicle Trips - ITE 10th Edition
- Mobile Land Use Mitigation -
- Energy Mitigation -
- Water Mitigation -
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,560.00	62,556.00
tblLandUse	LandUseSquareFeet	69,500.00	69,502.00
tblLandUse	LotAcreage	1.44	15.20
tblLandUse	LotAcreage	1.60	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	49.97	46.11
tblVehicleTrips	SU_TR	1.05	0.94
tblVehicleTrips	SU_TR	25.24	23.29
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	42.70	37.75

**2.0 Emissions Summary**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
Energy	3.8300e-003	0.0348	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						572.2395
Mobile	0.8618	4.2110	10.3682	0.0340	2.6705	0.0295	2.7000	0.7159	0.0275	0.7434						3,143.2841
Waste						0.0000	0.0000		0.0000	0.0000						65.9606
Water						0.0000	0.0000		0.0000	0.0000						125.2912
<b>Total</b>	<b>1.4041</b>	<b>4.2458</b>	<b>10.3991</b>	<b>0.0342</b>	<b>2.6705</b>	<b>0.0321</b>	<b>2.7027</b>	<b>0.7159</b>	<b>0.0302</b>	<b>0.7460</b>						<b>3,906.7789</b>

#### 4.0 Operational Detail - Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.8618	4.2110	10.3682	0.0340	2.6705	0.0295	2.7000	0.7159	0.0275	0.7434						3,143.2841

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT
	Weekday	Saturday	Sunday	
General Office Building	609.33	138.26	58.81	1,492,796
Regional Shopping Center	2,623.63	3,204.65	1618.66	5,543,500
<b>Total</b>	<b>3,232.96</b>	<b>3,342.90</b>	<b>1,677.46</b>	<b>7,036,296</b>

#### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

#### 5.0 Energy Detail

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						534.0849
Natural Gas Unmitigated	3.8300e-003	0.0348	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						38.1546

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

Unmitigated

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

Land Use	kBTU/yr	tons/yr								MT/yr						
General Office Building	571762	3.0800e-003	0.0280	0.0235	1.7000e-004	2.1300e-003	2.1300e-003	2.1300e-003	2.1300e-003							30.6927
Regional Shopping Center	139004	7.5000e-004	6.8100e-003	5.7200e-003	4.0000e-005	5.2000e-004	5.2000e-004	5.2000e-004	5.2000e-004							7.4619
<b>Total</b>		<b>3.8300e-003</b>	<b>0.0348</b>	<b>0.0293</b>	<b>2.1000e-004</b>	<b>2.6500e-003</b>	<b>2.6500e-003</b>	<b>2.6500e-003</b>	<b>2.6500e-003</b>							<b>38.1546</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	875158				279.8418
Regional Shopping Center	755103				254.2431
<b>Total</b>					<b>534.0849</b>

### 6.0 Area Detail

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	
Category	tons/yr										MT/yr						
Unmitigated	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005							3.4900e-003

### 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	
SubCategory	tons/yr										MT/yr						
Architectural Coating	0.0612					0.0000	0.0000		0.0000	0.0000							0.0000
Consumer Products	0.4772					0.0000	0.0000		0.0000	0.0000							0.0000
Landscaping	1.6000e-004	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005							3.4900e-003
<b>Total</b>	<b>0.5386</b>	<b>2.0000e-005</b>	<b>1.6900e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>							<b>3.4900e-003</b>

### 7.0 Water Detail

Category	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				125.2912

### 7.2 Water by Land Use

#### Unmitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

General Office Building	11.119 / 6.81489			85.6403
Regional Shopping Center	5.14804 / 3.15525			39.6509
<b>Total</b>				<b>125.2912</b>

## 8.0 Waste Detail

### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated				65.9606

## 8.2 Waste by Land Use

### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	58.18				29.2588
Regional Shopping Center	72.98				36.7018
<b>Total</b>					<b>65.9606</b>

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

Equipment Type	Number
----------------	--------

## 11.0 Vegetation



Category	tons/yr										M1/yr							
Area	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005								3.4900e-003
Energy	3.3800e-003	0.0307	0.0258	1.8000e-004		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003								487.4301
Mobile	0.7717	3.7090	8.8923	0.0287	2.2313	0.0250	2.2562	0.5981	0.0233	0.6214								2,649.0127
Waste						0.0000	0.0000		0.0000	0.0000								16.4901
Water						0.0000	0.0000		0.0000	0.0000								78.1840
<b>Total</b>	<b>1.3137</b>	<b>3.7397</b>	<b>8.9197</b>	<b>0.0288</b>	<b>2.2313</b>	<b>0.0273</b>	<b>2.2586</b>	<b>0.5981</b>	<b>0.0256</b>	<b>0.6238</b>								<b>3,231.1205</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
Percent Reduction	2.49	5.81	8.35	10.05	10.81	9.79	10.80	10.81	9.79	10.77	0.00	0.00	0.00	0.00	0.00	12.84

#### 4.0 Operational Detail - Mobile

##### 4.1 Mitigation Measures Mobile

- Increase Density
- Increase Diversity
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	tons/yr										M1/yr						
Mitigated	0.7717	3.7090	8.8923	0.0287	2.2313	0.0250	2.2562	0.5981	0.0233	0.6214							2,649.0127

##### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Mitigated Annual VMT
	Weekday	Saturday	Sunday	
General Office Building	609.33	138.26	58.81	1,331,400
Regional Shopping Center	2,358.83	3,128.20	1579.74	4,547,514
<b>Total</b>	<b>2,968.16</b>	<b>3,266.45</b>	<b>1,638.54</b>	<b>5,878,914</b>

##### 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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

##### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

#### 5.0 Energy Detail

Historical Energy Use: N

##### 5.1 Mitigation Measures Energy

- Exceed Title 24
- Install High Efficiency Lighting
- Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000						453.8101
NaturalGas Mitigated	3.3800e-003	0.0307	0.0258	1.8000e-004		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003						33.6199

## 5.2 Energy by Land Use - NaturalGas

### Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	496532	2.6800e-003	0.0243	0.0205	1.5000e-004		1.8500e-003	1.8500e-003		1.8500e-003	1.8500e-003						26.6543
Regional Shopping Center	129760	7.0000e-004	6.3600e-003	5.3400e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004						6.9657
<b>Total</b>		<b>3.3800e-003</b>	<b>0.0307</b>	<b>0.0258</b>	<b>1.9000e-004</b>		<b>2.3300e-003</b>	<b>2.3300e-003</b>		<b>2.3300e-003</b>	<b>2.3300e-003</b>						<b>33.6200</b>

## 5.3 Energy by Land Use - Electricity

### Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	762470				243.8084
Regional Shopping Center	656745				210.0017
<b>Total</b>					<b>453.8101</b>

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003

### 6.2 Area by SubCategory

#### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0612					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.4772					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.6000e-004	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
<b>Total</b>	<b>0.5386</b>	<b>2.0000e-005</b>	<b>1.6900e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>						<b>3.4900e-003</b>

## 7.0 Water Detail

---

### 7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				78.1840

### 7.2 Water by Land Use

#### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	8.89522 / 1.20957				53.4411
Regional Shopping Center	4.11843 / 0.560021				24.7429
<b>Total</b>					<b>78.1840</b>

## 8.0 Waste Detail

---

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				16.4901

### 8.2 Waste by Land Use

#### Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	14.545				7.3147
Regional Shopping Center	18.245				9.1754
<b>Total</b>					<b>16.4901</b>

## 9.0 Operational Offroad

---

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

## 10.0 Stationary Equipment

---

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

Equipment Type	Number
----------------	--------

## 11.0 Vegetation

---