APPENDIX A

Notice of Preparation, Initial Study, and Responses to the NOP

NOTICE OF PREPARATION

Lead Agency:
Agency Name: City of Rolling Hills Estates
Street Address: 4045 Palos Verdes Drive North
City/State/Zip: Rolling Hills Estates, CA 90274
Contact: Jeannie Naughton, AICP, Planning Manager
Telephone: (310) 377-1577 ext. 115

Consulting Firm:
Name: Michael Baker International
Street Address: 3760 Kilroy Airport Way, Suite 270
City/State/Zip: Long Beach, CA 90806
Contact: John Bellas, EIR Project Manager
Telephone: (562) 200-7170

SUBJECT: Notice of Preparation of Draft Environmental Impact Report and Notice of Public Scoping Meeting for the City of Rolling Hills Estates General Plan Update

The City of Rolling Hills Estates (City) intends to prepare an Environmental Impact Report (EIR) for the City's General Plan Update (GPU). In accordance with Section 15082 of the California Environmental Quality Act (CEQA) Guidelines, the City has prepared this Notice of Preparation (NOP) to provide the public, property owners, responsible agencies, and other interested parties with information regarding the Project and its potential environmental effects. The EIR will be prepared by outside consultants under the supervision of the City.

The City requests your written comments as to the scope and contents of the EIR, including mitigation measures or project alternatives to reduce potential environmental impacts from the proposed GPU. Comments must be submitted in writing according to directions below. If you represent a public agency, the City seeks written comments as to the scope and content of the environmental information in the EIR that are germane to your agency's statutory responsibilities in connection with the proposed GPU.

PROJECT LOCATION:
The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles, as shown in **Figure 1**. The General Plan Planning Area (Planning Area) is the land area addressed by the City of Rolling Hills Estates (City) General Plan Update (Proposed Project), which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent) and the unincorporated Sphere of Influence (SOI) (16 percent). As shown in **Figure 2**, the boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

PROJECT DESCRIPTION:
The Rolling Hills Estates General Plan is a guidance document that describes the City's vision as a livable community with excellent services, a strong identity, healthy business opportunities, and a strong and efficient government. Future land use, circulation, housing, conservation, and other decisions in the City are guided by goals and policies set forth in the General Plan. The General Plan is a State-required legal document (Government Code Section 65300) that provides guidance to decision-makers regarding the conservation of resources and the future physical form and character of development in the City. It is the jurisdiction's official statement regarding the extent and types of development of land and infrastructure that will achieve the community's physical, economic, social, and environmental goals. The General Plan expresses the City's goals and articulates the City's intentions with respect to the rights and expectations of the general public, property owners, community interest groups, prospective investors, and business interests. Although the General Plan consists of individual sections, or elements, that address a specific area of concern, it also embodies a comprehensive and integrated planning approach.

In 2017, the City initiated a multi-year process to update the City's General Plan, referred to as "General Plan Update" or GPU. If adopted, this General Plan Update would be the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions through the anticipated plan horizon year of 2040. The General Plan Update would serve as the City's "blueprint" for future development, providing the policy guidance for achieving the community's vision.

The City's current General Plan dates back to 1992 and is in need of an update as new opportunities, challenges, and approaches have emerged in recent years. The proposed GPU will address emerging issues and community priorities, ensure compliance with State law, and revise implementing policy frameworks to focus on present and future goals and policy objectives. The proposed GPU will also incorporate new and updated assumptions, data, and analysis, as well as establish a new vision and blueprint for development and investment through 2040.

The proposed GPU will address nine General Plan elements, seven of which are required by State law (i.e., circulation, conservation, housing, land use, noise, open space, and safety). In addition to these seven elements, the proposed GPU will establish a Sustainability Element.

Rolling Hills Estates is essentially a built-out City with only two vacant parcels (other than those designated for open space), a low-density residential parcel and a commercial use parcel. The residential neighborhoods, as well as the parks and recreation areas, in the City are well-established and are not expected to change during the timeline of this proposed GPU. It is anticipated that the GPU will adjust the land use designations of certain parcels to match their current uses, including certain open space areas and parcels built out with high-density residential uses as these uses are not envisioned to change during the GPU timeline. The institutional properties (e.g., schools) are also envisioned to remain during the planning horizon. However, depending on the availability of the space, the proposed GPU may allow certain institutional uses to create opportunities for on-site affordable workforce housing. In addition, the existing mixed-use overlay that allows for residential development in the Commercial District may be extended to parcels designated for commercial office use.

In addition to citywide planning direction, the GPU is expected to include focused long-range planning direction and visioning for the Commercial District. Potential changes to the Commercial District include revising development standards to reflect market needs and incentivize development/redevelopment in a manner consistent with the City's vision for the District (to be developed as part of the GPU). Examples of potential revisions to development standards include:

- Increasing the allowed residential density in the mixed-use overlay;
- Consideration of form-based code standards; and
- Modernization of parking requirements to utilize land more efficiently.

POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROJECT:
Based on an Initial Study prepared by the City, which may be accessed on the City's website (https://www.ci.rolling-hills-estates.ca.us/departments/administration/city-clerk/public-notices), the proposed GPU could have potentially significant impacts in the following topic areas, which will be addressed in the EIR: aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials (emergency access and wildland fire only), land use and planning, noise, population and housing, public services/recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

HOW TO COMMENT AND NOTICE OF SCOPING MEETING:
Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice. As such, the comment period for the Notice of Preparation begins on **May 21, 2021** and ends on **June 21, 2021**. Please send your written response to **Jeannie Naughton, AICP, Planning Manager** at the address shown above. We would appreciate the name of a contact person in your agency.

Also, a public scoping meeting will be held in an online format using Zoom to share information regarding the proposed GPU and the environmental review process and to receive written public comments regarding the scope and content of the environmental analysis to be addressed in the EIR. Staff and environmental consultants will be available, and a brief presentation is scheduled. The City encourages all interested individuals and organizations to attend this meeting. Written comments may be submitted during the environmental review period, and verbal comments or public testimony will be taken at the public scoping meeting. No decisions about the proposed GPU will be made at the public scoping meeting. The date, time, and location of the public scoping meeting are as follows:

Date: **Thursday, June 3, 2021**
Time: **6:00 p.m.**
Location: **Virtual Meeting via:**
https://us02web.zoom.us/j/82510460014?pwd=ZXYxdDRlYlJLQ2ZhQTY4ZVNoV2NlZz09
Meeting ID: 825 1046 0014 Passcode: 192777
Dial in by phone: +1-408-638-0968 or +1-669-900-6833
Meeting ID: 825 1046 0014 Passcode: 192777

This meeting will serve as a public forum to discuss the environmental issues identified for the EIR and any other issues identified by the public that should be included for further analysis within the EIR for the proposed GPU.

Date: May 14, 2021

Jeannie Naughton

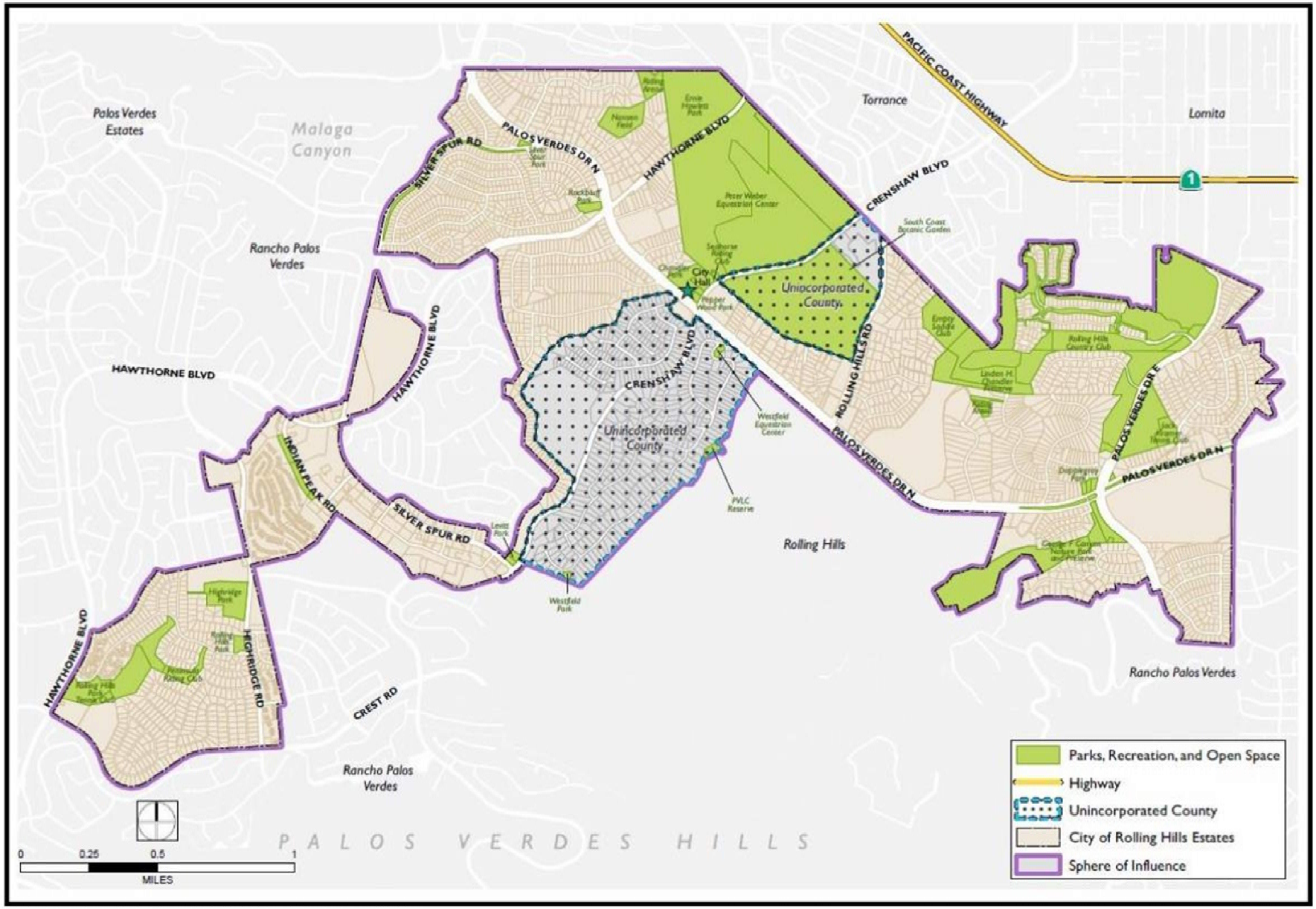
Title: Jeannie Naughton, AICP, Planning Manager
Telephone: (310) 377-1577 ext. 115

Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

California Environmental Quality Act
INITIAL STUDY

City of Rolling Hills Estates General Plan Update

Lead Agency:

City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274
(310) 377-1577
Contact: Jeannie Naughton,
Planning Manager

May 2021

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A. ENVIRONMENTAL CHECKLIST FORM

1. Project Title:

City of Rolling Hills Estates General Plan Update (GPU)

2. Lead Agency Name and Address:

City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

3. Lead Agency's Contact Person and Telephone Number:

Jeannie Naughton, AICP, Planning Manager
City of Rolling Hills Estates
(310) 377-1577 ext. 115

4. Project Location:

The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles, as shown in **Figure 1**. The General Plan Planning Area (Planning Area) is the land area addressed by the City of Rolling Hills Estates (City) General Plan Update (Proposed Project), which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent)and the unincorporated Sphere of Influence (SOI) (16 percent). As shown in **Figure 2**, the boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

5. Project Sponsor's Name and Address:

City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

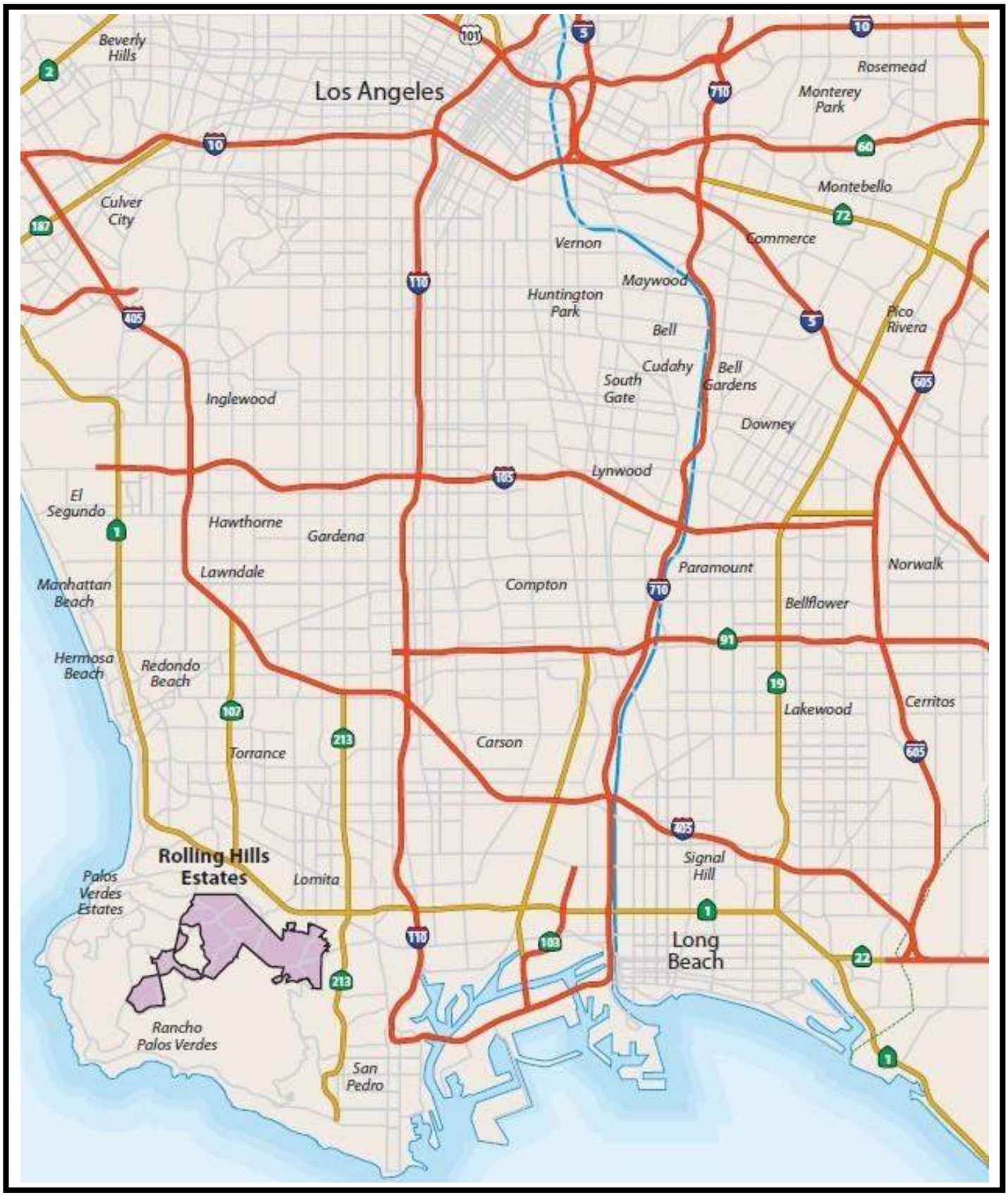
6. General Plan Designations:

The City's current land use plan consists of 10 land use categories, including four that are related to commercial development, another four that correspond to residential development, one that corresponds to institutional uses, and another one that relates to open space. Below is a summary of the General Plan land use designations as identified in Table 2-1 of the Land Use Element of the City's General Plan (Land Use Element).[1]

<u>Commercial Development</u>

- **Commercial General:** The main commercial district of the City along Silver Spur Road is designated as Commercial General on the land use plan.

[1] City of Rolling Hills Estates, *Land Use Element of the City of Rolling Hills Estates General Plan*, 1992.

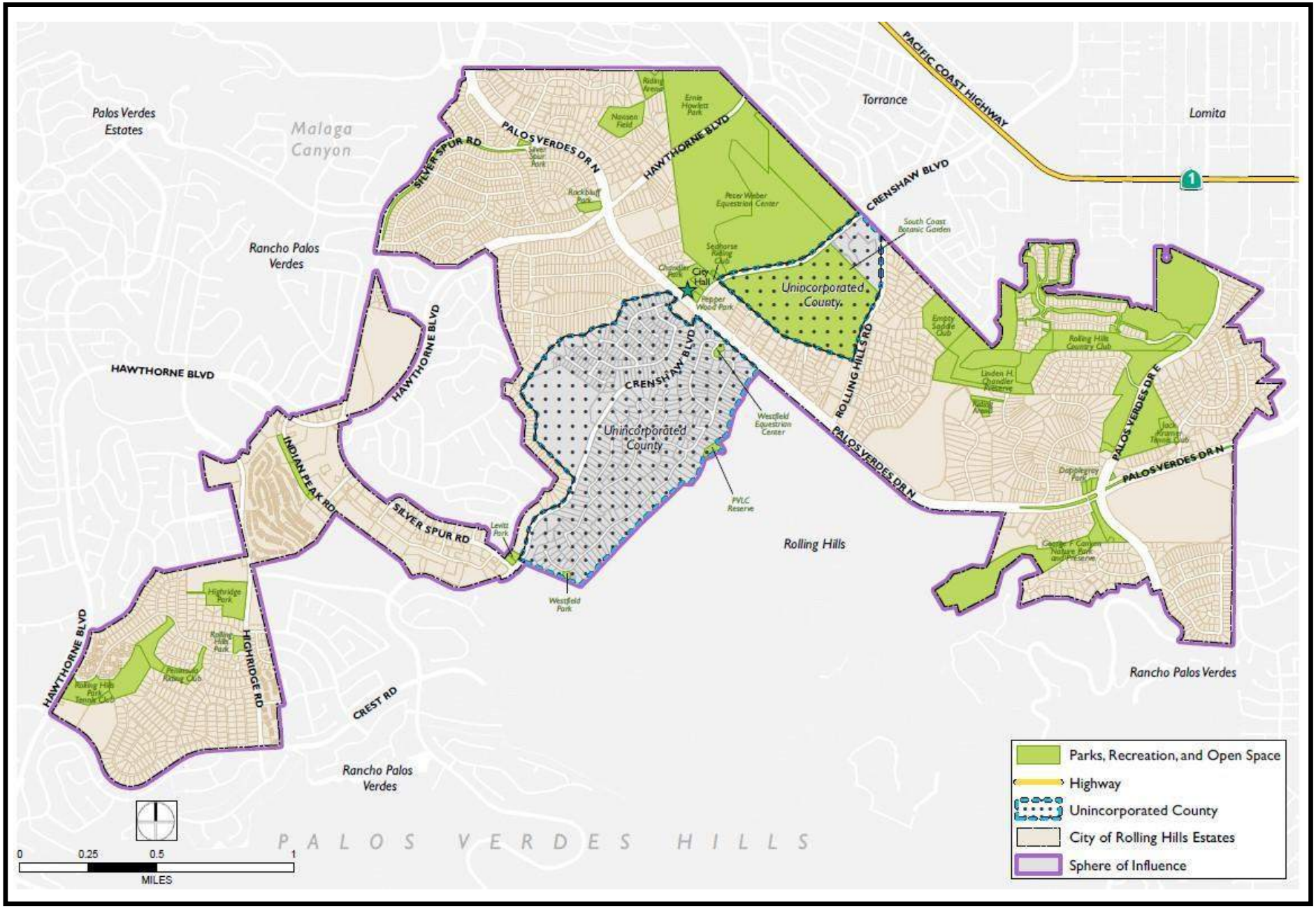


Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

- **Commercial/Office:** The Commercial/Office designation applies to office and administrative activities. A number of smaller parcels of land at different locations in the City are identified as Commercial/Office, usually at key intersections.

- **Neighborhood Commercial:** The Neighborhood Commercial designation refers to smaller single commercial uses located at key intersections.

- **Commercial Recreation:** A number of private riding clubs, tennis clubs, and golf courses are designated as Commercial Recreation.

Residential Development

- **Very Low Density Residential:** Areas designated as Very Low Density on the land use map correspond to areas that include the Chandler Trust and areas along Strawberry Lane.

- **Low Density Residential:** This land use category applies to single-family detached units constructed on large lots. Most of the areas designated as Low Density Residential correspond to areas within the equestrian overlay.

- **Medium Density Residential:** This land use category applies to single-family detached units constructed on smaller lots. Most of the area designated as Medium Density Residential is located in the Rollingwood area, an area on Crest west of The Ranch, and in an area adjacent to Hawthorne Boulevard. Not more than four units per gross acre are permitted.

- **High Density Residential:** This designation applies to multiple-family detached and attached units constructed as gross densities of up to eight units per acre. Most of the area designated as High Density Residential is located in three distinct areas in the western portion of the City.

Residential Uses

- **Institutional:** The Institutional category applies to a wide range of public uses, including public schools, private schools, churches, City Hall, and other public and quasi-public uses.

Open Space

- **Open Space:** The Open Space category applies to public parks and private land reserved for open spaces.

The existing General Plan also provides for a number of overlay designations, which identify additional development standards that are above and beyond those included in the base General Plan land use designations and zone districts that must be considered in future planning and development. These overlay designations included in the City's Land Use Element are as follows:

- **Cultural Resources Overlay:** This designation applies to a portion of the City where archaeological resources are known or suspected to exist. All areas designated as having a high sensitivity in the Conservation Element of the City's General Plan (Conservation Element) are included within the Cultural Resources Overlay.

- **Horse Overlay:** A substantial portion of the City is located within a Horse Overlay zone district, which identifies those areas where keeping of horses is permitted and where horse keeping areas are required to be preserved.

- **Scenic Corridor Overlay:** The Conservation Element includes an Scenic Corridor Overlay designation, which applies to a number of important arterial roadways in the City. The roadways include Hawthorne Boulevard, Palos Verdes Drive North, Crenshaw Boulevard, and Silver Spur Road. This overlay applies to all properties abutting the designated roadways identified above.

- **Parks Development Overlay:** This overlay designation applies to those areas of the City where new park facilities development may occur pursuant to General Plan Land Use Policy. This overlay designation is different from the other overlay zone in that it functions like a floating zone. The designation indicates a general area where future development is likely without identifying specific parcels. Three areas of the City have been included in this designation are Dapplegray School, Palos Verdes Landfill, and George F. Canyon Nature Center and Preserve.

- **Ecological Resource Overlay:** This overlay designation applies to those portions of the City where sensitive habitats are located. Any areas within the City identified as having a high ecological sensitivity in the Conservation Element is located within this overlay designation.

- **Multi-use Trail Overlay:** The Open Space and Recreation Element of the City's General Plan (Open Space and Recreation Element) contains a Master Plan of Trails, which identifies both existing and future trails.

- **Hazards Management Overlay:** The Public Safety Element of the City's General Plan (Public Safety Element) indicates those areas of the City that may be subject to some type of environmental hazard, including seismic risk, flood hazard, or slope stability.

- **Mixed-Use Overlay:** This overlay designation is very site-specific and applies only to those areas included with the Commercial General land use designations. This overlay designation is designed to promote mixed-use development in and around the Peninsula Center commercial district and at the corner of Hawthorne Boulevard and Crest Road, adjacent to Cresta Verde Drive.

7. Zoning:

The City's current zoning districts are presented in **Table 1**, below.

Table 1
Zoning Districts

Zone	District	Land Use
R-A-E	Single Family Residential – Limited Agricultural District (minimum lot size of 1 acre)	Single family residences, one dwelling unit per lot, guest house
R-A-20	Single Family Residential – Limited Agricultural District (minimum lot size of 20,000 sf)	Single family residences, one dwelling unit per lot, guest house
R-A-15	Single Family Residential – Limited Agricultural District (minimum lot size of 15,000 sf)	Single family residences, one dwelling unit per lot, guest house

Table 1
Zoning Districts

Zone	District	Land Use
R-A-10	Single Family Residential – Limited Agricultural District (minimum lot size of 10,000 sf)	Single family residences, one dwelling unit per lot, guest house
RPD	Residential Planned Development (maximum density at twice the General Plan designation)	Single family residences, one dwelling unit per lot, guest house
A	Agricultural	Single family residences, one dwelling unit per lot, guest house, patios and recreation areas, farms or ranches, land reclamation, facilities for the recovery of gases from previous landfills, golf course, temporary stockpiles of sand and gravel
I	Institutional	Public land uses, including schools, churches, and the Civic Center
C-R	Commercial Recreational	Stables, country clubs, archery ranges, fishing ponds, picnic grounds, playground, restaurants, pool, tennis, golf courses
C-O	Commercial Office	Business and professional offices
C-L	Restricted Commercial (Commercial Limited)	Business and professional offices, retail stores, services, public or private clubs
C-G	Commercial General	Business and professional offices, retail stores, services, sale or service of products, hotel, storage, parking structure, nurseries/garden, restaurants and delis

Note: sf = square feet

Source: City of Rolling Hills Estates, *Land Use Element of the City of Rolling Hills Estates General Plan*, Table 2-5, pp. 2-44 and 2-45, 1992.

8. Description of Project:

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In addition to citywide planning direction, the GPU is expected to include focused long-range planning direction and visioning for the Commercial District. Potential changes to the Commercial District include revising development standards to reflect market needs and incentivize development/redevelopment in a manner consistent with the City’s vision for the District (to be developed as part of the GPU). Examples of potential revisions to development standards include:

- Increasing the allowed residential density in the mixed-use overlay;
- Consideration of form-based code standards; and
- Modernization of parking requirements to utilize land more efficiently.

[2] Although the Housing Element of the City’s General Plan (Housing Element) was last updated in 2014, it will be updated again as part of this GPU. It should also be noted that the City has processed various amendments to the General Plan since its initial adoption.

9. Surrounding Land Uses and Setting:

The Planning Area is situated on a landscape of hills and valleys. As a result, streets conform with the contours of the hillsides, resulting in a curvilinear neighborhood street pattern. Although not all residents of the Planning Area are equestrians, urban form throughout the Planning Area is designed to be compatible with equestrian uses. Accordingly, Rolling Hills Estates is known primarily for its equestrian character. Equestrian trails meander along busy roads, through parks and secluded valleys, and behind houses in residential neighborhoods. The comprehensive system of trails connects equestrians to most parts of the Planning Area. Trails are demarcated with white three-railed fences, which simultaneously serve a functional purpose and visually reinforce the City's equestrian identity.

Residential is the most common land use in the Planning Area, accounting for approximately 60 percent of uses in the Planning Area. Most neighborhoods consist of only single-family residential development although there are a few neighborhoods consisting of single-family attached/townhomes or multi-family residential development.

Most commercial land uses in the Planning Area, including offices, mixed commercial and office uses, and general commercial, are located along Silver Spur Road, forming the City's primary retail and office corridor. There are a few other commercial land uses located throughout the Planning Area, including small clusters at the intersections of Rolling Hills Road and Palos Verdes Drive North and Monticello Drive and Palos Verde Drive North. The Peter Weber Equestrian Center in the City is the largest commercial parcel in the Planning Area, but buildings only comprise a small portion of the lot, and the remainder is open space and trails. Altogether, commercial uses represent a very small portion (approximately seven percent) of the Planning Area.

Public and community facilities, including churches, City administrative buildings, schools, medical facilities, and land used for utilities, account for 11 percent of all land uses in the Planning Area. Schools/educational facilities, including Palos Verdes Peninsula High School, Dapplegray Elementary School, and Chadwick School (located in the SOI) are distributed throughout the community. Public facilities include the Peninsula Center Library, located at 701 Silver Spur Road, and Rolling Hills Estates City Hall, located at 4045 Palos Verdes Drive North. The Palos Verdes Reservoir, located at the southeastern corner of Palos Verdes Drive North and Palos Verdes Drive East, represents most of the land categorized as utilities in the Planning Area.

Parks and recreational uses represent approximately 20 percent of land in the Planning Area. This land use category includes City-managed parks, open spaces, and horse arenas, as well as private properties not managed by the City, including the Rolling Hills Country Club, the South Coast Botanic Garden (in the SOI), and parks in the SOI.

10. Other Public Agencies Whose Approval Is Required:

Pursuant to Article 4 of the California Environmental Quality Act (CEQA) Guidelines, the City of Rolling Hills Estates is the lead agency for the proposed GPU, taking primary responsibility for conducting environmental review and approving or denying the project under consideration. There are no responsible or trustee agencies with any approval authority for proposed GPU.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Correspondence has been sent to the following Native American tribes, who have requested notification of projects subject to CEQA (pursuant to AB 52) in Rolling Hills Estates to determine if they wished to enter into consultation concerning the proposed GPU:

Tribe	Date Request Sent	Response
Gabrieleño Band of Mission Indians - Kizh Nation	May 12, 2021	Pending
Gabrieleno-Tongva San Gabriel Band of Mission Indians	May 12, 2021	Pending
Gabrielino/Tongva Nation	May 12, 2021	Pending
Gabrielino Tongva Indians of California Tribal Council	May 12, 2021	Pending
Gabrielino-Tongva Tribe	May 12, 2021	Pending
Fernandeño Tataviam Band of Mission Indians	May 12, 2021	Pending
San Fernando Band of Mission Indians	May 12, 2021	Pending
Soboba Band of Luiseño Indians	May 12, 2021	Pending
Torres Martinez Desert Cahuilla Indians	May 12, 2021	Pending

Formal consultation has not begun; results of tribal consultation will be included in the EIR that will be prepared for the proposed GPU.

B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a "potentially significant impact," as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Energy
☒ Geology and Soils	☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☒ Land Use and Planning	☐ Mineral Resources
☒ Noise	☒ Population and Housing	☒ Public Services
☒ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☒ Utilities and Service Systems	☒ Wildfire	☒ Mandatory Findings of Significance

C. DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because of the incorporated mitigation measures and revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

John M. Bellas
Michael Baker International

5-14-21
Date

Jeannie Naughton, AICP
Planning Manager

05.14.21
Date

D. EVALUATION OF ENVIRONMENTAL IMPACTS

For the evaluation of potential impacts, the questions in this Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of this Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the project. To each question, there are four possible responses:

- **No Impact**. The project would not have any measurable environmental impact on the environment.
- **Less Than Significant Impact**. The project would have the potential for impacting the environment, although this impact would be below established thresholds that are considered to be significant.
- **Less Than Significant Impact With Measures Incorporated**. The project would have the potential to generate impacts which may be considered a significant effect on the environment, although measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact**. The project would have impacts which are considered significant, and additional analysis is required to identify measures that could reduce these impacts to less than significant levels.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcrops, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☒	☐	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) **Potentially Significant Impact.** A scenic vista, or viewshed, may include views of natural features, such as watercourses, rock outcrops, natural vegetation, prominent natural landforms, and notable man-made features in the landscape. In the existing Open Space and Recreation Element, areas designated as open space are considered valuable resources due in part to their scenic value. According to the Open Space and Recreation Element, "open space refers to land or water, which is unimproved and devoted for the preservation of natural resources, for outdoor recreation or for public health and safety concerns," and "includes habitats of wildlife species, streams, agricultural land, groundwater recharge areas, areas with mineral deposits, trails, parks, outdoor recreation areas, utility easements, and scenic highway corridors."[3] The City's open space includes multiple features that can provide scenic vistas, including seven parks, 25 miles of equestrian trails, the Chandler Preserve, the George F. Canyon Nature Center and Stein/Hale Nature Trail, and scattered views of the Pacific Ocean to the west and south. In addition, the existing Conservation includes a Scenic Corridor Overlay Zone that identifies corridors within the City containing significant aesthetic and visual resources, including Hawthorne Boulevard, Palos Verdes Drive North, Crenshaw Boulevard, and Silver Spur Road.[4]

The proposed GPU would allow for development or redevelopment of certain vacant or under-developed parcels and intensification of existing uses. Therefore, future development has the potential to significantly impact scenic vistas and/or scenic roadways in Rolling Hills Estates. Accordingly, the proposed GPU's potential impact on scenic vistas and scenic roadways in

[3] City of Rolling Hills Estates, *Open Space and Recreation Element of the City of Rolling Hills Estates General Plan*, 1992.

[4] City of Rolling Hills Estates, *Conservation Element of the City of Rolling Hills Estates General Plan*, 1992.

the Planning Area will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **No Impact.** The City's current General Plan does not identify any State scenic highways within or in the vicinity of the Planning Area. Similarly, there are no State-designated or eligible highways in the Planning Area that are identified in the California Department of Transportation's State scenic highway program.[5] The closest officially designated State scenic highway, which extends approximately 2.5 miles, is the southern end of State Route 27 (Topanga Canyon State Scenic Highway) in unincorporated Los Angeles County, just west of the community of Pacific Palisades in the City of Los Angeles, which is approximately 21 miles northwest of the Planning Area. Additionally, the closest route on the list of scenic highways eligible for official designation is the northern end of State Route 1 (Pacific Coast Highway) in Long Beach near State Route 19 (Lakewood Boulevard), which is approximately 10 miles east of the Planning Area and extends over 35 miles south to San Juan Capistrano in Orange County. Therefore, the proposed GPU would have no impact related to scenic resources or State scenic highways, and this topic will not be further evaluated in the EIR.

c) **Potentially Significant Impact.** The majority of the City is built out and developed with a number of buildings, structures, and hardscape and landscape improvements. However, the proposed GPU would result in intensification of uses in certain portions of the Planning Area that may conflict with current applicable zoning and other regulations governing scenic quality due to taller structures and increased density. Consequently, buildout of the proposed GPU has the potential to impact the scenic quality of the Planning Area. Accordingly, the proposed GPU's potential impacts to scenic quality will be further evaluated in the EIR and mitigation measures identified as necessary.

d) **Less Than Significant Impact**. Light and glare impacts are typically associated with outdoor artificial light during nighttime hours. Glare may also be a daytime occurrence caused by the reflection of sunlight or artificial light from highly polished surfaces, such as glass and reflective cladding materials, and may interfere with the safe operation of a motor vehicle on adjacent streets. The proposed GPU would result in intensification of uses in certain portions of the Planning Area that would introduce new sources of nighttime illumination for architectural highlighting, parking, signage and security purposes, as well as new sources of potential glare from window glass.

However, new light sources, including landscape lighting, architectural lighting, and other outdoor lighting would be shielded and/or focused onto the future development site in accordance with lighting requirements set forth in the Rolling Hills Estates Municipal Code (RHEMC Chapter 17.42). Accordingly, new light sources are expected to be more ambient in nature and would only be used to provide the necessary illumination for general nighttime visibility (such as outdoor dining) and safety. Future development of residential structures and non-residential uses under the proposed GPU would also generate new sources of light that would be visible. As with all light sources, light emanating from new residential buildings and new non-residential uses (primarily in the commercial district) is generally low-level, and, as such, the overall increase in nighttime lighting in the Planning Area would be negligible to have any significant effect on nighttime sky views. With compliance to the RHEMC, lighting impacts

[5] California Department of Transportation, California State Scenic Highway System Map, 2018, https://www.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983, accessed March 8, 2021.

generated by future development under the proposed GPU would be less than significant. Daytime glare can result from sunlight reflecting from a shiny surface that would interfere with the performance of an off-site activity, such as the operation of a motor vehicle. Reflective surfaces can be associated with glass and polished surfaces, such as metallic or glass curtain walls and trim. Future development under the proposed GPU would incorporate low-reflectivity glass windows and architectural materials, which would reduce the potential for substantial glare effects from reflected sunlight . Therefore, potential glare of reflected sunlight from new building façades would not substantially alter the character of the Planning Area, and impacts related to glare would be less than significant. As such, this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

a) **No Impact.** Rolling Hills Estates is a suburban/urban area of Los Angeles County, which has limited space for productive agricultural uses, as designated in its current Land Use Element and in the Rolling Hills Estates Zoning Code. The City does not contain any land designated

by the Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program.[6] Therefore, the proposed GPU would have no impact on such resources, and this topic will not be further evaluated in the EIR.

b) **No Impact.** The proposed GPU does not include any changes to existing agricultural zoning. Further, there is no Williamson Act contract land in the City.[7] Therefore, the proposed GPU would not conflict with zoning for agricultural use or any Williamson Act contracts. Therefore, the proposed GPU would have no related impact, and this topic will not be further evaluated in the EIR.

c, d) **No Impact.** Forestlands, as defined by the California Public Resources Code (PRC), include lands that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allow for the management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. No forestlands or forest-related resources are located in the City. Similarly, there are no lands zoned for timberland production pursuant to the California Timberland Productivity Act of 1982. Therefore, the proposed GPU would not have an impact that could result in the loss of forestland or conversion of forestland to non-forest use, and these topics will not be further evaluated in the EIR.

e) **No Impact.** As identified in the City's Zoning Map and the existing Land Use Element, the City currently has three distinct areas in the northern and eastern parts of the City that are zoned and/or designated Agricultural. The proposed GPU does not involve changes to the designation of these plots of agriculturally zoned land. Further, there is no forestland located in the City. Therefore, the proposed GPU would have no impact involving the conversion of farmland to non-agricultural use or the conversion of forestland to non-forest use, and this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

[6] California Department of Conservation, California Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed March 9, 2021.

[7] California Department of Conservation, State of California Williamson Act Contract Land, 2016.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

a) **Potentially Significant Impact.** The Planning Area is located within the South Coast Air Basin (SCAB) and is subject to the air quality management plan (AQMP) prepared by the South Coast Air Quality Management District (SCAQMD). SCAQMD's 2016 AQMP is based on regional growth forecasts for the Southern California Association of Governments (SCAG) region. The intensification of land uses and new development in portions of the Planning Area under the proposed GPU could generate additional traffic volumes throughout the Planning Area, resulting in an increase in air pollutant emissions. Therefore, any future development within the Planning Area could result in potentially significant impacts to air quality. Accordingly, the proposed GPU's consistency with the AQMP will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** The Planning Area is located in the SCAB, a nonattainment area for ozone (O_3), fine particulate matter or particulate matter equal to or less than 2.5 microns in diameter ($PM_{2.5}$), respirable particulate matter or particulate matter equal to or less than 10 microns in diameter (PM_{10}), nitrogen dioxide (NO_2), and lead (Pb) for the Los Angeles County portion of the SCAB only. SCAQMD has significance thresholds for emissions that contribute to these nonattainment pollutants and their precursors. Implementation of the proposed GPU may produce air pollutants that exceed the SCAQMD's significance thresholds. Accordingly, regional air pollutant emissions generated by buildout of the proposed GPU will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact.** Sensitive receptors refer to locations where uses and/or activities result in increased exposure of persons more sensitive to the unhealthful effects of emissions, such as residents, school children, the elderly, and hospital patients, etc. Sensitive land uses within the Planning Area include residences, schools, and senior living facilities. Future development within the Planning Area may expose sensitive receptors to substantial pollutant concentrations. Accordingly, localized air pollutant emissions generated by buildout of the proposed GPU will be further evaluated in the EIR and mitigation measures identified as necessary.

d) **No Impact.** Residential development and commercial uses do not typically generate objectionable odors that affect a substantial number of people. Although some industrial land uses, such as wastewater treatment plants, food processing, compost facilities, and other industrial processes, have the potential to generate other emissions, such as those leading to objectionable odors, implementation of the proposed GPU would not result in the development of these uses within the Planning Area. Therefore, the proposed GPU would have no impact related to odors, and this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan?	☒	☐	☐	☐

a), d) **Potentially Significant Impact.** Most of the Planning Area is developed with suburban and urban land uses. Open space in the Planning area is present in the form of parks and reserves, including, but not limited to, Ernie Howlett Park and the South Coast Botanic Garden in the northern portion of the Planning area; the Linden H. Chandler Preserve and the George F. Canyon Nature Center and Preserve on the eastern end of the Planning Area; and Highridge Park in the southwestern portion of the Planning Area (see **Figure 2**). In addition, the former Palos Verdes Landfill, which is zoned Agricultural, is a substantial vestige of vacant land. Implementation of the proposed GPU would not result in the development of these areas with other land uses.

Although future development within the Planning Area would be focused in the urban core and infill locations, implementation of the proposed GPU has the potential to impact sensitive species, including, but not limited to, the coastal California gnatcatcher, least Bell's vireo, and Palos Verdes blue butterfly, through development of undeveloped/underdeveloped parcels in the Planning Area. In addition, implementation of the proposed GPU may result in indirect

impacts to these species, as well as the movement of migratory species, due to increased human activity and new light sources that could occur immediately adjacent to open space areas, including preserves within the Planning Area. Accordingly, potential impacts of the proposed GPU on sensitive species and habitat, as well as migratory species, will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** Riparian habitats occur along the banks of rivers and streams. Sensitive natural communities are natural communities that are considered rare in the region by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), or local regulatory agencies that are known to provide habitat for sensitive animal or plant species or are known to be important wildlife corridors. According to the USFWS National Wetlands Inventory, there are a number of segments of riverine wetlands running through the Planning Area.[8] The potential impacts of the proposed GPU on riparian habitats and sensitive natural communities will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact.** Section 404 of the Clean Water Act defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." According to the USFWS National Wetlands Inventory and as identified above, there are a number of segments of riverine wetlands running through the Planning Area. In addition, several freshwater ponds north of Palos Verdes Drive North and east of Crenshaw Boulevard, two freshwater emergent wetlands, and a lake (i.e., Palos Verdes Reservoir) were mapped by the USFWS as wetlands within the Planning Area.[9] The potential impacts of the proposed GPU on wetland habitats will be further evaluated in the EIR and mitigation measures identified as necessary.

e) **Potentially Significant Impact.** The existing Conservation Element identifies several ecological overlay zones throughout the Planning Area.[10] While future development within the Planning Area would be focused in the urban core and infill locations, implementation of the proposed GPU may encroach into these overlay zones, which may directly and/or indirectly impact sensitive habitats, resulting potential conflicts with the City's policies related to protecting biological/ecological resources. Accordingly, these potential impacts of the proposed GPU will be further evaluated in the EIR and mitigation measures identified as necessary.

f) **Potentially Significant Impact.** The Planning Area is not a part of any adopted habitat conservation plan (HCP) or natural community conservation plan (NCCP). It should be noted that the adjacent City of Rancho Palos Verdes has an established NCCP/HCP, which identifies two NCCP reserves boundary parcels immediately adjacent to the Planning Area boundaries – one to the south and west of Indian Peak Road and Crenshaw Boulevard, respectively, and the other one to the west of Hawthorne Boulevard at Crest Road. The proposed GPU, particularly the intensification within the commercial district, may have the

[8] U.S. Fish and Wildlife Service, National Wetlands Inventory (Surface Waters and Wetlands), https://www.fws.gov/wetlands/Data/Mapper.html, accessed January 21, 2021.

[9] U.S. Fish and Wildlife Service, National Wetlands Inventory (Surface Waters and Wetlands), https://www.fws.gov/wetlands/Data/Mapper.html, accessed January 21, 2021.

[10] City of Rolling Hills Estates, City of Rolling Hills Estates General Plan 2020, 1992.

potential to affect existing natural community or habitat conservation resources in these reserves. Accordingly, these potential impacts of the proposed GPU will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a) **Potentially Significant Impact.** Section 15064.5 of the CEQA Guidelines generally defines a historic resource as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources;" "a resource included in a local register of historical resources (…unless the preponderance of evidence demonstrates that it is not historically or culturally significant);" or any resource "which a lead agency determines to be historically significant…provided the lead agency's determination is supported by substantial evidence." Generally, a resource is considered "historically significant" if it is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; is associated with the lives of persons important in our past; embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual, or possesses high artistic values; or has yielded, or may be likely to yield, information important in prehistory or history. Per CEQA Guidelines Section 15064.5, a "substantial adverse change in the significance of an historical resource" is considered a significant effect on the environment; and a "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

Although there are no sites in the City currently listed in the National Register of Historic Places (National Register) or the California Register of Historical Resources (California Register), the Planning Area has seen a long development history dating back through the Mexican period (early to mid-1800s) and into the American period (late 1800s through mid-1900s). Although the proposed GPU would include policies to evaluate and document the significance of individual historic resources and include provisions to minimize the demolition of historically, architecturally, and culturally significant structures, new development or redevelopment may require demolition of such resources resulting in direct impacts or be located adjacent to such historic resources potentially resulting in indirect impacts. Accordingly, potential impacts of the

proposed GPU on historic resources will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** While much of the City is developed with uses where the ground has been previously disturbed, any future development within the Planning Area that requires excavation to depths greater than existing foundations may potentially cause the destruction of unknown archaeological resources as such resources could still be present in soils that have been previously disturbed. Accordingly, potential impacts of the proposed GPU on archaeological resources will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Less Than Significant Impact.** Most of the Planning Area is developed with suburban and urban land uses and has been subject to previous ground disturbance and grading. Therefore, the potential for uncovering human remains is low. However, any future development within the Planning Area that requires excavation to depths greater than existing foundations may have the potential to disturb existing but undiscovered human remains. If human remains were discovered during ground disturbance, any development under the proposed GPU would be required to comply with California Health and Safety Code Section 7050.5, which requires the project to halt until the county coroner has made the necessary findings as to the origin and disposition of the remains in accordance with Public Resources Code Section (PRC) 5097.98. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC). PRC Section 5097 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC. Implementation of the proposed GPU would be required to comply with provisions of State law regarding discovery of human remains. Accordingly, compliance with such regulation would ensure that impacts to human remains are less than significant. As such, this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

a), b) **Potentially Significant Impact.** The proposed GPU would allow for redevelopment of undeveloped or under-developed parcels and intensification of existing uses. Therefore, future development would include construction activities, such as demolition, clearing, grading, paving, and building construction, which would result in the increased consumption of energy during construction. Additionally, the operation of any future development may result in new sources of energy consumption due to additional residential and commercial uses within the Planning Area when compared to existing conditions. Although the proposed GPU

would include a Sustainability Element that would reduce the potential for any future development under the proposed GPU to result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency, the potential energy impacts of the proposed GPU will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☒	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would became unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☒	☐	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☒	☐	☐	☐

a.i) **No Impact.** The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazards of surface faulting and fault rupture by establishing regulatory zones around active faults. These zones extend from 200 feet to 500 feet on each side of the known fault and identify areas where a potential surface rupture could be hazardous for buildings used for

human occupancy. Development projects located within these zones are required to prepare special geotechnical studies to characterize the effects from any potential surface ruptures.

The Planning Area is located in the seismically active region of Southern California. Numerous active and potentially active faults with surface expressions (fault traces) have been mapped adjacent to, within, and beneath the Planning Area. Active earthquake faults are faults where surface rupture has occurred within the last 11,000 years. Surface rupture of a fault generally occurs within 50 feet of an active fault line. However, the Planning Area is not located within a designated Alquist-Priolo Earthquake Fault Zone.[11] The nearest Alquist-Priolo Earthquake Fault Zone is the Long Beach Fault, approximately 12 miles east of the Planning Area.[12] Therefore, the potential for future surface rupture at any location within the Planning Area is very low. In addition, any future development within the Planning Area would be required to comply with construction requirements in applicable State and local building codes to ensure habitable structures are built to a level such that they can withstand acceptable seismic risk. As such, implementation of the proposed GPU would not exacerbate existing environmental conditions from ground rupture from known earthquake faults. Accordingly, the proposed GPU would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, and no impacts would occur. As such, this topic will not be further evaluated in the EIR.

a.ii) **Less Than Significant Impact.** The Planning Area is located within a seismically active region, as is all of Southern California. Consequently, as with any location in Southern California, the Planning Area is susceptible to strong seismic ground shaking in the event of a major earthquake. Future development under the proposed GPU would need to be constructed to withstand potential peak accelerations as defined by the California Building Code (CBC). In addition, the design of individual structures would be subject to review by the City's Building and Safety Department, including review by the City Geologist and the City Engineer. With the required compliance with the CBC, no future development under the proposed GPU is expected to result in significant impacts related to strong seismic ground shaking. Compliance with the CBC and City Building Code would ensure that impacts related to seismic ground shaking would be less than significant, and this topic will not be further evaluated in the EIR.

a.iii) **No Impact.** Liquefaction occurs when saturated soils lose their strength and behave like a liquid as a result of strong ground shaking. The three geologic conditions that must be present in order for liquefaction to occur are (1) strong ground shaking; (2) shallow groundwater, generally less than 50 feet in depth; and (3) the presence of unconsolidated sandy alluvium, typically Holocene in age. According to the seismic hazard zones maps prepared by the California Geological Survey (CGS) for the Redondo Beach and Torrance Quadrangles, the Planning Area is not in a liquefaction hazard zone, with the exception of a very small area between the Palos Verdes Reservoir and Green Hills Memorial Park, which is immediately adjacent to the Rolling Hills Estates city limits. However, no change is anticipated in this small area, currently designated as Open Space, under the proposed GPU. Accordingly, the proposed GPU would not directly or indirectly cause potential substantial adverse effects,

[11] California Department of Conservation, California Geological Survey, AQ Zapp: California Earthquake Hazards Zone Application, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed January 21, 2021.

[12] California Department of Conservation, California Geological Survey, AQ Zapp: California Earthquake Hazards Zone Application, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed January 21, 2021.

including the risk of loss, injury, or death involving liquefaction, and no impacts would occur. As such, this topic will not be further evaluated in the EIR.

a.iv), c) **Potentially Significant Impact.** The potential for unstable ground conditions and landslides exists in all areas in the Planning Area with steep slopes. Landslides are believed to result from the combined influence of water-saturated soils and grading activities associated with development. Water saturation might result from rainfall, over-irrigation, and sewage effluent discharge. Rainfall could loosen soil cohesion or trigger soil erosion and result in hillside slope failure. According to the seismic hazard zone maps for the Redondo Beach and Torrance Quadrangles, the Planning Area encompasses numerous earthquake-induced landslide zones, particularly along Crenshaw Boulevard, along the northern boundary of the Planning Area, and the areas south of Palos Verdes Drive North between Crenshaw Boulevard and Silver Spur Road. Although future development within the Planning Area would be focused in the commercial district and infill locations, implementation of the proposed GPU may expose future development to risk of loss, injury, or death involving landslides. Accordingly, potential impacts of the proposed GPU related to landslides will be further evaluated in the EIR and mitigation measures identified as necessary.

The major cause of ground subsidence is withdrawal of groundwater. No significant regional subsidence as a result of either groundwater pumping or oil extraction has been reported in the Planning Area. Therefore, it is unlikely that ground subsidence would become a substantial hazard during implementation of any future development within the Planning Area, and, as such, this topic will not be further evaluated in the EIR.

b) **Less Than Significant Impact.** During construction of future development within the Planning Area, the soils on the construction site may become exposed and, thus, subject to erosion. However, any future development project would be required to comply with existing regulations that reduce erosion potential, including SCAQMD Rule 403, which would reduce the potential for wind erosion. Similarly, water erosion during construction would be substantially reduced by complying with the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The NPDES Construction General Permit (mandatory for construction sites that disturb more than one acre of land) requires the construction of a project to incorporate best management practices (BMPs) to reduce erosion and prevent eroded soils from washing off-site. Any development project under one acre would also be required to implement construction BMPs to minimize erosion and the discharge of pollutants off-site pursuant to the City's stormwater ordinance. Accordingly, the potential to increase erosion during any construction activity would be substantially reduced through required compliance with existing regulations. Upon completion of any future development within the Planning Area, the development site would be covered by structures, landscaping, pavement, and other hard surfaces. Therefore, because development of any site within the Planning Area would reduce erosion potential compared to existing conditions and would be required to comply with SCAQMD Rule 403 and NPDES requirements, any future development within the Planning Area would not result in substantial wind or water soil erosion or the loss of topsoil. As such, impacts related to erosion or the loss of topsoil would be less than significant, and this topic will not be further evaluated in the EIR.

d) **Less Than Significant Impact.** Expansive soils are prone to change in volume because of the presence or absence of moisture. Expansive soils decrease in volume when dry and increase when wet (shrink-swell). Expansive soils typically have high percentages of certain kinds of clay particles, which can expand 10 percent or more as they become wet. Soils

composed of mostly sand and gravel do not absorb much water. Expansive soils can cause structural damage, cracked driveways and sidewalks, heaving of roads and highway structures, and disruption of pipelines and other utilities. Expansive soils can occur near water sources. As discussed above, since there are a number of segments of riverine wetlands running through the Planning Area, expansive soils have the potential to occur within the Planning Area. However, the design of individual structures would be subject to review by the City's Building and Safety Department, including review by the City Geologist and the City Engineer. With the required compliance with the CBC, no future development under the proposed GPU is expected to result in significant impacts related expansive soils. Compliance with the CBC and City Building Code would ensure that impacts related to expansive soils would be less than significant, and this topic will not be further evaluated in the EIR.

e) **Less Than Significant Impact.** Any future development within the Planning Area would be required to connect to the existing public sewer system with the exception of the potential development of accessory dwelling units (ADUs) in single-family neighborhoods that utilize existing on-site systems, including septic tanks or alternative wastewater disposal systems. Given that these septic tanks or alternative wastewater systems already exist and function in those areas, the soils are not incapable of supporting such systems. Prior to the issuance of a building permit, property owners would be required to demonstrate that their on-site system meets the capacity requirements to adequately serve the addition of an ADU on their property. As such, impacts related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems would be less than significant, and this topic will not be further evaluated in the EIR.

f) **Potentially Significant Impact.** The Planning Area encompasses areas that are considered sensitive for paleontological resources. While future development within the Planning Area would be focused in the commercial district and infill locations that have been previously graded to accommodate the existing or previous structures and uses, there remains the possibility that fossils are present in the soil in the Planning Area and that ground disturbance by future development under the proposed GPU could damage such fossils. Impacts to fossils and to unique geological resources could be potentially significant. The potential impacts of the proposed GPU on paleontological and/or unique geological resources will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

a) **Potentially Significant Impact.** Implementation of the proposed GPU would involve changes in land use intensity and additional traffic volumes throughout the City, resulting in new direct

and indirect sources of greenhouse gas (GHG) emissions. Accordingly, potential impacts of the proposed GPU on GHG emissions will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** The California Air Resources Board's (CARB) Scoping Plan is California's GHG reduction strategy to achieve the State's GHG emissions reduction targets established by Assembly Bill (AB) 32 and Senate Bill (SB) 32, which are 1990 levels by year 2020 and 40 percent below 1990 levels by year 2030. Statewide strategies to reduce GHG emissions would ensure that the State is on target to achieve the GHG emissions reduction goals of AB 32 and SB 32. Implementation of the proposed GPU would generate GHG emissions from construction and operational activities within the Planning Area, which may conflict with GHG reduction targets of CARB's Scoping Plan, and, as such, impacts may be potentially significant. Accordingly, potential impacts of the proposed GPU on GHG emissions will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles or a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☒	☐	☐	☐

a) **Less Than Significant Impact.** Many types of businesses use chemicals and hazardous materials, and their routine business operations involve chemicals that are manufactured, warehoused, or transported. Currently, a variety of existing business operations in the Planning Area use, store, or transport hazardous substances, as well as generate hazardous waste. The secondary activities that would occur with commercial uses (e.g., building and landscape maintenance) would also involve the use of hazardous materials.

The proposed GPU would not change regulations and oversight related to hazardous materials. Future development projects under the proposed GPU would include both residential and nonresidential uses. Residential uses would be similar to those that have been previously built although they could be at a higher density at certain locations. Future residential development would not result in significant impacts involving the routine transport, use, or disposal of hazardous materials or wastes. Future commercial development that replaces or expands existing commercial uses could require the routine transport, use, storage, and disposal of hazardous materials, similar to existing uses. All such future development would be required to comply with existing regulations regarding the use of hazardous materials and wastes and would continue to be subject to oversight by the Los Angeles County Fire Department and other regulatory agencies, as applicable. Therefore, compliance with existing regulations would ensure that this impact would be less than significant, and this topic will not be further evaluated in the EIR.

b) **Less Than Significant Impact.** Incidents that result in an accidental release of a hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. If not properly contained and cleaned, the contamination could become harmful to the environment and to people who may be exposed to that contamination through direct skin contact, ingestion, breathing, etc. Human exposure to contaminated soil or water can have potential health effects depending on a variety of factors, including the nature of the contaminant and the degree of exposure.

There is a potential for accidental releases of hazardous substances in many aspects of daily life, involving transport, handling, storage, use, and disposal of materials that contain hazardous substances in the course of regular activities at businesses, institutions, residential communities, and other uses. However, numerous existing regulations are in place at the federal, State, and local levels to require precautionary measures in the design of vehicles that transport hazardous substances; the routes they are allowed to travel; design, operations, and monitoring of facilities that use large quantities of hazardous substances; proper disposal of hazardous materials and wastes; and oversight by federal, State, and local regulatory agencies to ensure adherence to these regulations. The proposed GPU would have no effect on those existing regulatory standards and would not authorize any kinds of activities that are more likely than existing activities in the City to be at risk for an accidental release of hazardous substances or wastes. Therefore, impacts resulting from future development projects under

the proposed GPU that involve accidental releases of hazardous materials would be less than significant, and this topic will not be further evaluated in the EIR.

c) **Less Than Significant Impact.** Several schools within the Palos Verdes Peninsula Unified School District are located within, or within 0.25 mile of, the Planning Area, including Dapplegray Elementary School, Rancho Vista Elementary School, Silver Spur Elementary School, Soleado Elementary School, Ridgecrest Intermediate School, Rudecinda Sepulveda Dodson Middle School, and Palos Verdes Peninsula High School, as well as a number of private schools, including, but not limited to, Palos Verdes Montessori Academy, Rolling Hills Country Day School, Peninsula Heritage School, and Chadwick School. Future development under the proposed GPU would not introduce any new land use that might generate hazardous or acutely hazardous air emissions. Additionally, implementation of the proposed GPU would not change existing protocols and procedures for proper handling of hazardous or acutely hazardous materials, substances, or waste. Future development under the proposed GPU would be required to comply with federal, State, and local regulations regarding transport and handling of hazardous materials. As such, impacts related to the generation of hazardous or acutely hazardous emissions or handling of such materials within a quarter mile of an existing school would be less than significant, and this topic will not be further evaluated in the EIR.

d) **Less Than Significant Impact.** Based on a review of EnviroStor, the California Department of Toxic Substances Control's (DTSC) data management system for tracking site cleanup, permitting, enforcement, and investigation efforts, no sites included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 were found active or open for investigation for the potential future development sites identified under the proposed GPU. Several cases of leaking underground storage tanks were identified in the Peninsula Shopping Center/Promenade on the Peninsula areas; however, each of those cases have been remediated and closed.[13] The former Palos Verdes Landfill was also identified as being on the National Priorities List, the priority list of hazardous waste sites in the U.S. eligible for long-term remedial investigation and remedial action (i.e., cleanup) financed under the federal Superfund program; however, implementation of the proposed GPU would not result in the development of the former Palos Verdes Landfill with other land uses. In addition, any future development under the proposed GPU would be required to comply with existing regulations regarding hazardous materials and wastes and would continue to be subject to oversight by the Los Angeles County Fire Department and other regulatory agencies, as applicable. Therefore, compliance with existing regulations would ensure that this impact would be less than significant, and this topic will not be further evaluated in the EIR.

e) **No Impact.** The nearest public use airport to the Planning Area is Zamperini Field in the City of Torrance, which is located approximately 0.5 mile to the north. However, implementation of the proposed GPU would not result in a safety hazard or excessive noise for people residing or working in the Planning Area. Future development under the proposed GPU would not introduce any new uses to the Planning Area but would result in the intensification of mixed-use and residential uses in certain portions of the Planning Area that would not interfere airport

[13] California Department of Toxic Substances Control, EnviroStor Database, https://www.envirostor.dtsc.ca.gov/public/map/?global_id=19490181, accessed March 15, 2021.

uses. Accordingly, no impact related to airport use would occur as a result of the implementation of the proposed GPU, and this topic will not be further evaluated in the EIR.

f) **Potentially Significant Impact.** According to Exhibit 8-2 of the Public Safety Element, Hawthorne Boulevard, Crenshaw Boulevard, Highridge Road, and Palos Verdes Drive East are the designated Los Angeles County disaster routes in the Planning Area. The City also proposed Palos Verdes Drive North and both Silver Spur Road and Indian Peak Road between Hawthorne Boulevard and Crenshaw Boulevard as the City's disaster routes.[14] Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area, which could generate additional traffic on the local street network in the Planning Area and which may, in turn, potentially reduce emergency vehicular access to and from the Planning Area and traffic flow along evacuation routes in the event of an emergency situation. Accordingly, the proposed GPU's potential impacts related to this issue will be further evaluated in the EIR under the topic of "Wildfire" and mitigation measures identified as necessary.

g) **Potentially Significant Impact.** The California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (FRAP) assesses the amount and extent of California's forests and rangelands, analyzes their conditions and identifies alternative management and policy guidelines. FRAP provides high-quality spatial data, maps, and on-line data viewers which provide critical information on the health and risk factors associated with forest and range lands within the State of California. According to FRAP's Fire Hazard Severity Zone (FHSZ) Viewer, the entire Planning Area is located within a Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area (LRA).[15] Consequently, any future development under the proposed GPU may potentially expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires. Accordingly, potential impacts related to wildfire will be further evaluated in the EIR under the topic of "Wildfire" and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐

[14] City of Rolling Hills Estates General Plan Advisory Committee, City of Rolling Hills Estates General Plan 2020, Public Safety Element of the Rolling Hills Estates General Plan, 1992.

[15] California Department of Forestry and Fire Protection (CAL FIRE), Fire and Resource Assessment Program (FRAP) Fire Hazard Severity Zone (FHSZ) Viewer, https://egis.fire.ca.gov/FHSZ/, accessed March 15, 2021.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a), c.i) **Less Than Significant Impact.** Section 402 of the federal Clean Water Act requires National Pollutant Discharge Elimination System (NPDES) permits for stormwater discharges from storm drain systems to waters of the U.S. The City of Rolling Hills Estates is a co-permittee in the Los Angeles County storm drain system permit or "Municipal Permit." Future development projects under the proposed GPU, specifically on sites that are one acre or larger, would be subject to the requirements of the NPDES Construction General Permit and the RHEMC. Both the RHEMC and the NPDES Construction General Permit require application of erosion and sedimentation control best management practices (BMPs) during construction for proper water quality management. Any development project under one acre would be required to implement construction BMPs to minimize erosion and the discharge of pollutants off-site. Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. Each development project would be required to prepare a Wet Weather Erosion Control Plan, which will identify BMPs, and be designed to prevent erosion and construction pollutants from entering the City's storm drain and receiving waters. By requiring implementation of a Wet Weather Erosion Control Plan and BMPs during construction activities, the City ensures that these activities would not violate standards or degrade water quality. As part of its normal project approval and construction oversight activities, the City monitors compliance with these requirements.

The Los Angeles County Municipal Permit also requires that stormwater pollution prevention plans (SWPPPs) be prepared for all construction projects with disturbed areas of one acre or greater. The Statewide NPDES Construction General Permit maintained by the State Water

Resources Control Board also requires a SWPPP for construction projects that involve one or more acres of land disturbance. The SWPPP is required to outline the BMPs that would be incorporated during construction. These BMPs would minimize construction-induced water pollutants by controlling erosion and sediment, establishing waste handling/disposal requirements, and providing non-stormwater management procedures.

Future development projects under the proposed GPU would also be required to implement stormwater pollution controls during operation. Pursuant to Section 8.38.070(c) of the RHEMC, development projects greater than one acre of ground disturbance must incorporate required BMPs into plans submitted to the City as follows:

1. General. Projects must control pollutants, pollutant loads, and runoff volume from the project site by minimizing the impervious surface area and controlling runoff through infiltration, bioretention, or rainfall harvest and use. Projects must incorporate BMPs in accordance with the requirements of the municipal NPDES permit.

2. Stormwater Mitigation. Project applicants must prepare a stormwater mitigation plan that includes those BMPs necessary to control stormwater pollution from the completed project. The structural or treatment control BMPs (including, as applicable, post-construction treatment control BMPs) in the stormwater mitigation plan must meet the design standards set forth in the municipal NPDES permit.

With the required compliance with the NPDES Construction General Permit and the RHEMC, future development projects under the proposed GPU would result in less-than-significant impacts related to a violation of water quality standards or waste discharge requirements, substantial degradation of surface water or groundwater quality, and substantial erosion or siltation on- or off-site, and this topic will not be further evaluated in the EIR.

b) **Less Than Significant Impact.** The Planning Area is primarily developed with impervious surfaces, with a few vacant/undeveloped parcels identified as potential sites for future development. Consequently, the potential for groundwater recharge through percolation of stormwater or landscaping water is currently low. Future development under the proposed GPU would not significantly change the Planning Area's groundwater recharge ability and would not substantially impede percolation of water into the underlying substrate at a level beyond current conditions. In addition, future development projects under the proposed GPU would not directly use any groundwater to serve future uses. While the proposed GPU would result in an increase in commercial and residential uses in the Planning Area, these uses are not expected to result in a substantial depletion of groundwater resources. The Planning Area is served by the California Water Service Company (Cal Water), which purchases imported water from the Metropolitan Water District of Southern California (MWD), not from groundwater wells, to serve the domestic water system on the Palos Verdes Peninsula. Accordingly, implementation of the proposed GPU would not substantially decrease groundwater supplies or interfere with groundwater recharge. Therefore, related impacts would be less than significant, and this topic will not be further evaluated in the EIR.

c.ii), c.iii) **Less Than Significant Impact.** Construction of any future development project under the proposed GPU may involve removal of existing structures and associated hardscape, as well as the disturbance and removal of soil. These activities have the potential to temporarily alter existing drainage patterns on construction sites and immediately surrounding areas by exposing underlying soils, modifying flow direction, and making the construction site

temporarily more permeable. As discussed in the responses to Checklist Questions 10.a and 10.c.i, any future development project, particularly those to be developed on sites that are one acre or larger, would be subject to the requirements of the NPDES Construction General Permit and the RHEMC. In accordance with the requirements of this permit, development projects would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows and ensure that stormwater or construction watering runoff does not impact off-site drainage facilities or receiving waters. Therefore, through compliance with all NPDES Construction General Permit requirements, as well as compliance with applicable City grading permit regulations, construction activities associated with future development projects under the proposed GPU would not substantially alter the construction site's drainage patterns in a manner that would result in flooding on- or off-site or exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

As a special provision, the Los Angeles County Municipal Permit mentioned above requires permittees to implement Low Impact Development (LID) design principles for development and redevelopment activities that meet the applicability criteria in Part VI.D.7.b of the permit, which are as follows:[16]

New Development Projects

(a) All development projects equal to one acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area

(b) Industrial parks 10,000 square feet or more of surface area

(c) Commercial malls 10,000 square feet or more surface area

(d) Retail gasoline outlets 5,000 square feet or more of surface area

(e) Restaurants 5,000 square feet or more of surface area

(f) Parking lots 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces

(g) Street and road construction of 10,000 square feet or more of impervious surface area shall follow U.S. Environmental Protection Agency (USEPA) guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets[17] to the maximum extent practicable. Street and road construction applies to standalone streets, roads, highways, and freeway projects, and also applies to streets within larger projects.

(h) Automotive service facilities 5,000 square feet or more of surface area

[16] California Regional Water Quality Control Board, Los Angeles Region, Order No. R4-2012-0175 as amended by State Water Board Order WQ 2015-0075 and Los Angeles Water Board Order R4-2012-0175-A01, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4, amended on September 8, 2016.

[17] U.S. Environmental Protection Agency, Managing Wet Weather with Green Infrastructure Municipal Handbook, EPA-833-F-08-009, December 2008.

(i) Redevelopment projects in subject categories that meet Redevelopment thresholds identified in the list of Redevelopment Projects below

(j) Projects located in or directly adjacent to, or discharging directly to a Significant Ecological Area (SEA), where the development will:

  (i) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and

  (ii) Create 2,500 square feet or more of impervious surface area

(k) Single-family hillside homes. To the extent that a Permittee may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the applicable Permittee's Code and Ordinances, each Permittee shall require that during the construction of a single-family hillside home, the following measures are implemented:

  (i) Conserve natural areas

  (ii) Protect slopes and channels

  (iii) Provide storm drain system stenciling and signage

  (iv) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability

  (v) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability.

<u>Redevelopment Projects</u>

(a) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site.

(b) Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, the entire project must be mitigated.

(c) Where redevelopment results in an alteration of less than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

  (i) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

(ii) Existing single-family dwelling and accessory structures are exempt from the redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

Future development projects that meet such criteria are required to control pollutants, pollutant loads, and runoff volume emanating from the development site by minimizing the impervious surface area and controlling runoff from impervious surfaces through infiltration, bioretention, and/or rainfall harvest and use. In addition, such projects are required to retain on-site runoff from the 0.75-inch, 24-hour rain event, or the 85th percentile 24-hour runoff event determined from the Los Angeles County 85th percentile precipitation isohyetal map, whichever is greater.

Accordingly, while there may be an increase in imperviousness of a development site, this increase would not substantially increase the amount of runoff from the site. Flows would be accommodated by the existing stormwater treatment and conveyance system. In addition, implementation of BMPs required by the Los Angeles County Municipal Permit would target the pollutants that could potentially be carried in stormwater runoff. Therefore, with the incorporation of LID BMPs, construction and operation of any future development project under the proposed GPU would not cause flooding, create runoff volumes that would exceed the capacity of existing infrastructure, or result in substantial additional sources of polluted runoff. Therefore, related impacts would be less than significant, and this topic will not be further evaluated in the EIR.

c.iv), d) **No Impact.** The entire Planning Area is shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Nos. 06037C1919G and 06037C1940F as located in Zone X, which is defined as "areas determined to outside the 0.2 percent annual chance floodplain."[18] Accordingly, implementation of any future development project under the proposed GPU would not result in the placement of uses within a 100-year or 500-year flood zone to impede or redirect flood flows. In addition, the Planning Area is not within a flood hazard, tsunami, or seiche zone and, as such, would not risk release of pollutants due to inundation of any future development site. Therefore, no impact related to flood flows or release of pollutants due to inundation would occur, and these topics will not be further evaluated in the EIR.

e) **Less Than Significant Impact.** Section 303 of the Clean Water Act requires states to designate uses for all bodies within state boundaries (intrastate waters) and to establish water quality criteria for those water bodies. Those water bodies that do not satisfy the water quality criteria for their designated uses are identified as impaired. In order to improve the quality of impaired water bodies and, thus, achieve the water quality criteria, the USEPA requires states to establish Total Maximum Daily Load (TMDL) standards that apply to tributary sources for impaired water bodies. While future development projects under the proposed GPU may result in minor alteration of existing localized drainage patterns with the development site, the storm drain system that serves the Planning Area would continue to drain into Machado Lake, Santa Monica Bay, and the Los Angeles Harbor, which are identified as impaired water

[18] Federal Emergency Management Administration, National Flood Insurance Program, Flood Insurance Rate Map No. 06037C1919G (January 2016) and Map No. No. 06037C1940F (September 2008).

bodies. TMDLs have been adopted for these water bodies for trash, bacteria, nitrogen, and phosphorous.[19]

The County of Los Angeles and the Los Angeles County Flood Control District, as well as the cities of Rolling Hills Estates, Palos Verdes Estates, and Rancho Palos Verdes, collaborated on the development of an Enhanced Watershed Management Program (EWMP) to address the water quality priorities for the Palos Verdes Peninsula watersheds. The EWMP for the Palos Verdes Peninsula was approved by the Los Angeles Regional Water Quality Control Board (LARWQCB) in April 2016 and modifications to the EWMP in March 2019.[20] The ultimate goals of the EWMP is to ensure that discharges from the MS4 (1) achieve applicable Water Quality Based Effluent Limitations (WQBELs) that implement TMDLs, (2) do not cause or contribute to exceedances of receiving water limitations, and (3) non-stormwater discharges from the MS4 are not a source of pollutants to receiving waters. In order to achieve the goals of the MS4 Permit, the approach of the EWMP is to (1) prioritize water quality issues resulting from stormwater and non-stormwater discharges from the MS4 to receiving waters; (2) identify and implement strategies, control measures, and BMPs that achieve applicable water quality-based effluent limitations, prevent exceedances of receiving water limitation and non-stormwater discharges that are effectively prohibited, reduce the discharge of pollutants to the maximum extent practicable; (3) execute an integrated monitoring program and assessment program to determine progress towards achieving applicable limitations and/or action levels; and (4) modify strategies, control measures, and BMPs as necessary based on analysis of monitoring data collected pursuant to the Monitoring and Reporting Program (MRP) to ensure that applicable water quality-based effluent limitations and receiving water limitations and other milestones set forth in the EWMP are achieved in the targeted timeframes.

Both construction and operation activities associated with future development projects under the proposed GPU could generate additional water pollutants that could adversely affect stormwater quality and the water quality in downstream Machado Lake. Construction-related activities can release sediments from exposed soils into local storm drains. In addition, construction waste materials, such as chemicals, liquid products, and petroleum products, may make their way into local storm drains. However, as indicated above, future development projects would be subject to the requirements of the NPDES Permit, the Los Angeles County Municipal Permit, and the RHEMC. Pursuant to these requirements, best management practices (BMPs) would be instituted to effectively offset these potential sources of water pollution. As such, implementation of any future development project under the proposed GPU would not introduce new pollutants or an increase in pollutants that would conflict or obstruct the EWMP or any water quality control plans for the Palos Verdes Peninsula Watershed. In addition, as discussed in the response to Checklist Question 10.b, implementation of the proposed GPU would not substantially decrease groundwater supplies or interfere with groundwater recharge; as such, implementation of any future development project under the proposed GPU would not introduce new pollutants or an increase in pollutants that would

[19] City of Rolling Hills Estates, Storm Water Pollution Prevention, https://www.ci.rolling-hills-estates.ca.us/government/public-works/storm-water-pollution-prevention, accessed April 29, 2021.

[20] Los Angeles Regional Water Quality Control Board, Approval of the Palos Verdes Peninsula Watershed Management Group's Enhanced Watershed Management Program (EWMP), April 19, 2016; Los Angeles Regional Water Quality Control Board, Approval of Modifications to the Palos Verdes Peninsula Watershed Management Group's Enhanced Watershed Management Program, March 6, 2019.

conflict or obstruct a sustainable groundwater management plan. Impacts would be less than significant, and this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

a) **No Impact.** Implementation of the proposed GPU would involve development of vacant land or under-developed parcels, intensification of existing land uses in certain portions of the Planning Area, and the introduction of new land uses to certain portions of the Planning Area. Land use changes proposed in the Planning Area are intended to tie into the existing uses and surrounding neighborhoods. Development would occur within existing urban areas and infill sites, which is not expected to divide an established community. As such, no impact related to the physical division of an established community would occur, and this topic will not be further evaluated in the EIR.

b) **Potentially Significant Impact.** The proposed GPU would update the City's adopted General Plan and modify certain land use designations in the Planning Area. As discussed above, implementation of the proposed GPU would involve development of vacant land or under-developed parcels, intensification of existing land uses in certain portions of the Planning Area, and the introduction of new land uses to certain portions of the Planning Area. Accordingly, potential impacts related to the consistency of the proposed GPU with other land use plans, policies, and/or regulations governing the City and the Planning Area will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a), b) **No Impact**. According to the California Geological Survey's 2010 Update of Mineral Land Classification, a portion of Rolling Hills Estates is designated Mineral Resource Zone 2, due to the presence of construction aggregate resources in the vicinity of Chandler Quarry.[21] However, the update identifies that the majority of the resource zone has been lost due to urbanization or land filling. The land formerly occupied by the Chandler Quarry is now a mix of country club and housing uses, with no further mineral extraction occurring.

There are no mineral resource extraction or processing operations in the Planning Area. Since the portion of the Planning Area designated as Mineral Resource Zone 2 is no longer used for mineral extraction and has been repurposed for commercial recreation and residential uses, it is considered extremely unlikely that there might be a future proposal to remove existing land uses in order to establish an operation to extract mineral resources. Therefore, the proposed GPU would not adversely affect the availability of a known mineral resource or a locally important mineral resource recovery site, and no impacts would occur. As such, these topics will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a) **Potentially Significant Impact.** The intensification of land uses and new development in portions of the Planning Area under the proposed GPU could generate additional traffic volumes and stationary noise sources throughout the Planning Area, which may result in temporary, periodic, or permanent increases in ambient noise or in noise levels in excess of standards established in the RHEMC. Accordingly, issues relating to noise will be further evaluated in the EIR and mitigation measures identified as necessary. Emphasis will be placed on the major noise sources in the Planning Area, including, but not limited to, traffic on Crenshaw Boulevard, Hawthorne Boulevard, Palos Verdes Drive North, Silver Spur Road,

[21] California Geological Survey, Update of Mineral Land Classification for Portland Cement Concrete-Grade Aggregate in the San Gabriel Valley Production-Consumption Region, Los Angeles County, California, 2010.

Indian Peak Road, and Highridge Road; commercial land use areas; and scattered stationary sources.

b) **Potentially Significant Impact.** Future development projects under the proposed GPU may result in excessive short-term ground-borne vibration or noise from construction or operation activities. Potentially significant impacts relating to ground-borne vibration and ground-borne noise will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **No Impact.** The nearest public use airport to the Planning Area is Zamperini Field in the City of Torrance, which is located approximately 0.5 mile to the north. Implementation of the proposed GPU would not cause any noise-related impacts from aircraft operating to or from Zamperini Field. Therefore, the proposed GPU would not expose people to excessive airport related noise and would have no associated impacts, and, as such, this topic will not be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

a) **Potentially Significant Impact.** The existing population of the City as of January 1, 2020 was estimated by the California Department of Finance as 8,066 people.[22] The Proposed GPU would allow for development of both housing and commercial uses, which may induce substantial population growth in the Planning Area. Accordingly, potential impacts of the proposed GPU related to growth inducement will be further evaluated in the EIR.

b) **Less Than Significant Impact.** The GPU would allow for the development of both housing and commercial uses, as well as the intensification of certain land uses within the Planning Area. However, implementation of the proposed GPU is not expected to displace any existing housing; rather, it would increase the number of dwelling units in the Planning Area by allowing higher intensity residential uses and mixed-use development. As a result, impacts related to displacement would be less than significant, and this topic will not be further evaluated in the EIR.

[22] California Department of Finance, E-1 Population Estimates for Cities, Counties, and the State – January 1, 2019 and 2020, https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/, accessed March 12, 2021.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?	☒	☐	☐	☐
b) Police protection?	☒	☐	☐	☐
c) Schools?	☒	☐	☐	☐
d) Parks?	☒	☐	☐	☐
e) Other public facilities?	☒	☐	☐	☐

a) **Potentially Significant Impact.** The Planning Area is within the jurisdiction of and is part of the Consolidated Fire Protection District of Los Angeles County (i.e., Los Angeles County Fire Department (LACFD)), which provides fire protection and emergency medical services to the City and all unincorporated areas in Los Angeles County, including those within the Planning Area. Fire Station 106, located at 27413 Indian Peak Road is within the boundaries of the Planning Area. Fire Station 56, located at 12 Crest Road West in the City of Rolling Hills, is approximately 1.5 miles southwest of Peninsula Center and west of the southern portion of the Planning Area near Highridge Road and Crest Road. The intensification of land uses and new development in portions of the Planning Area under the proposed GPU could potentially increase the demands on fire department personnel and equipment. Accordingly, the proposed GPU's potential impacts on fire and protection services as provided by the LACFD will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** The City contracts with the Los Angeles County Sheriff's Department (LACSD) for police protection and law enforcement services. The main sheriff's station serving the City and the Planning Area is located at 26123 Narbonne Avenue in Lomita, immediately adjacent to the Planning Area where Narbonne Avenue becomes Palos Verdes Drive East at the City boundary. The intensification of land uses and new development in portions of the Planning Area under the proposed GPU could potentially increase the demands on police protection and law enforcement services. Accordingly, the proposed GPU's potential impacts on police protection and law enforcement services as provided by the LACSD will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact**. The Palos Verdes Peninsula Unified School District (PVPUSD) serves the Planning Area's student residents. PVPUSD operates two preschools, 10 elementary schools (K-5), four intermediate schools (6-8), and three high schools (9-12). The PVPUSD serves the City, as well as the other three Peninsula cities and the unincorporated areas of the Palos Verdes Peninsula. The intensification of land uses and new development in portions of the Planning Area under the proposed GPU would result in additional population, which would, in turn, result in the generation of new students due to the substantial increase in allowable dwelling units. Accordingly, the proposed GPU's potential

impacts on schools as provided by the PVPUSD will be further evaluated in the EIR and mitigation measures identified as necessary.

d) **Potentially Significant Impact.** The City currently owns and maintains seven parks/preserve, 25 miles of equestrian trails, and 10 miles of bicycle paths. The City also has its own tennis club and stables.[23] The intensification of land uses and new development in portions of the Planning Area under the proposed GPU would result in additional population, which could, in turn, increase the overall demand on parks and other recreational services and facilities in the Planning Area. Accordingly, the proposed GPU's potential impacts on parks and recreational services and facilities will be further evaluated in the EIR and mitigation measures identified as necessary.

e) **Potentially Significant Impact.** The implementation of the proposed GPU may result in an increased demand on public facilities, including public libraries. This may, in turn, cause an increased need for maintenance or additional services. Accordingly, the proposed GPU's potential impacts on other public services will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☒	☐	☐	☐

a), b) **Potentially Significant Impact.** As identified in the response to Checklist Question 15.d, above, the City currently owns and maintains seven parks/preserve, 25 miles of equestrian trails, and 10 miles of bicycle paths. The City also has its own tennis club and stables. The intensification of land uses and new development in portions of the Planning Area under the proposed GPU would result in additional population, which could, in turn, increase the overall demand on parks and other recreational services and facilities in the Planning Area. Accordingly, the proposed GPU's potential impacts on parks and recreational services and facilities will be further evaluated in the EIR and mitigation measures identified as necessary.

[23] City of Rolling Hills Estates, City Parks & Recreation, https://www.ci.rolling-hills-estates.ca.us/government/community-services/city-parks-facilities-trails, accessed March 23, 2021.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?	☒	☐	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐	☐	☐
d) Result in inadequate emergency access?	☒	☐	☐	☐

a) **Potentially Significant Impact.** Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area. These changes could result in an increase and redistribution of vehicle trips, resulting in potentially significant impacts to the City's circulation system. Proposed GPU policies would promote pedestrian, bicycle, and public transit circulation and walkable communities, which may change circulation patterns in the Planning Area. Accordingly, the proposed GPU's potential impacts on the circulation system will be further evaluated in a transportation study and in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** Senate Bill (SB) 743, which went into effect in January 2014, required the Governor's Office of Planning and Research to change the way public agencies evaluate transportation impacts of projects under CEQA. Under SB 743, the focus of transportation analysis has shifted from driver delay, which is typically measured by traffic level of service (LOS), to a new measurement that better addresses the State's goals on reduction of GHG emissions, development of a multi-modal transportation networks, and promotion of a diversity of land uses. CEQA Guidelines Section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled (VMT) is identified as the most appropriate measure of transportation impacts, replacing LOS, and referring to the amount and distance of automobile travel attributable to a project.

Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area. As a result, VMT would increase over existing conditions. Accordingly, the proposed GPU's potential impacts on VMT will be further evaluated in a transportation study and in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact.** The proposed GPU includes numerous policies to promote the safety and capacity of pedestrian and bicycle infrastructure in the Planning Area, including, but not limited to, consideration of reduction of vehicle travel lanes in favor of bicycle lanes in

a couple of streets within the Planning Area; reducing conflicts for bicyclists, such as driveways and right-turn lanes; and widening sidewalks. The safety of roadway and sidewalk improvements as identified in the proposed GPU for all roadway users—drivers, bicyclists, pedestrians, and public transit users—will be further evaluated in a transportation study and in the EIR and mitigation measures identified as necessary.

d) **Potentially Significant Impact.** Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area, which could result in changes to circulation patterns and emergency access routes, potentially resulting in significant impacts to emergency access. Accordingly, the proposed GPU's potential impacts on emergency access will be further evaluated in a transportation study and in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. TRIBAL CULTURAL RESOURCES.				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

a), b) **Potentially Significant Impact.** A potentially significant impact would occur if a known or unknown tribal cultural resource were removed, altered, or destroyed as a result of future development under the proposed GPU. While much of the City is developed with uses where the ground has been previously disturbed, any future development within the Planning Area that requires excavation to depths greater than existing foundations may potentially cause the destruction of unknown tribal cultural resources as such resources could still be present in soils that have not been previously disturbed, as well as those that have been disturbed. Accordingly, potential impacts of the proposed GPU on tribal cultural resources will be further evaluated in the EIR and mitigation measures identified as necessary. In addition, AB 52 establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to tribal cultural resources, as defined in PRC Section 21074, as part of CEQA.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
19. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

a) - c) **Potentially Significant Impact.** Water service is provided to the Planning Area by Cal Water. Cal Water's Palos Verdes District is part of the Rancho Dominguez District, which encompasses the service areas of the Hermosa-Redondo, Dominguez, and Hawthorne systems. Cal Water's Rancho Dominguez District purchases imported Colorado River and State Water Project water supplies from MWD to serve the domestic water system on the Palos Verdes Peninsula. Cal Water does not have any groundwater wells within the Palos Verdes District.[24] The wastewater collection system and sewer treatment services are provided by the Los Angeles County Sanitation Districts (LACSD). The Planning Area is located in the Joint Outfall System of the LACSD. The closest treatment facility to the Planning Area is the Joint Water Pollution Control Plant located in Carson. Southern California Edison (SCE) and Southern California Gas Company (SoCalGas) provide electrical and natural gas services to the Planning Area. Telecommunication services are offered through several providers. Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area, which would result in additional demands from these utility service providers. Accordingly, the proposed GPU's potential impacts on water, wastewater, energy, and telecommunications will be further evaluated in the EIR and mitigation measures identified as necessary.

[24] California Water Service, 2015 Urban Water Management Plan, Palos Verdes District, June 2016.

d), e) **Potentially Significant Impact.** Refuse disposal and recycling services to the Planning Area are provided by a private entity, Waste Management, which contracts with the Sanitation Districts of Los Angeles County (SDLAC) for disposal of refuse. Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area, which would result in increased solid waste generation and corresponding increased demand for landfill disposal. Accordingly, the proposed GPU's potential impacts related to solid waste will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
20. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	☒	☐	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☒	☐	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☒	☐	☐	☐

a) **Potentially Significant Impact.** As discussed in the response to Checklist Question 9.g, almost the entire Planning Area is located within a VHFHSZ in an LRA. Implementation of the proposed GPU would allow for the intensification of land uses and new development in portions of the Planning Area, which would generate additional traffic on the local street network in the Planning Area and which may, in turn, potentially reduce emergency vehicular access to and from the Planning Area and traffic flow along evacuation routes in the event of a wildfire. Accordingly, the proposed GPU's potential impacts related to this issue will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** As discussed above, almost the entire Planning Area is located within a VHFHSZ in an LRA. Consequently, any future development under the proposed GPU may potentially expose occupants of future development to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Accordingly, potential impacts related to this issue will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact.** Implementation of any future development project under the proposed GPU would require the installation of stormwater facilities, electrical facilities, and other utilities. While these facilities would not be expected to individually increase fire risks, collectively they could potentially result in exacerbated fire risks for the development site and the Planning area or temporary or ongoing impacts to the environment. Accordingly, potential impacts related to this issue will be further evaluated in the EIR and mitigation measures identified as necessary.

d) **Potentially Significant Impact.** As previously indicated in the response to Checklist Questions 7.a.iv and 7.c, the potential for unstable ground conditions and landslides exists in all areas in the Planning Area with steep slopes. Although future development within the Planning Area would be focused in the urban core and infill locations, implementation of the proposed GPU may expose future development to significant risks, including downslope landslides as a result of post-fire slope instability. Accordingly, potential impacts related to this issue will be further evaluated in the EIR and mitigation measures identified as necessary.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
21. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

a) **Potentially Significant Impact.** Future development projects under the proposed GPU would involve intensification of land uses and new development in portions of the Planning Area. As stated in the responses to Checklist Question Nos. 4.a through 4.d, these proposed changes could adversely impact sensitive species and habitat, which may potentially cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species. Furthermore, while the Planning Area does not have any historic sites listed in the

National Register or the California Register, the Planning Area may have archaeological or paleontological resources that have not yet been discovered. Accordingly, potential impacts to biological and cultural resources will be further evaluated in the EIR and mitigation measures identified as necessary.

b) **Potentially Significant Impact.** Implementation of the General Plan Update and its land use changes could result in cumulative impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils (as it relates to landslides), GHG emissions, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. Cumulative impacts to these resources—for which potentially significant impacts are identified in this Initial Study—will be further evaluated in the EIR and mitigation measures identified as necessary.

c) **Potentially Significant Impact.** As discussed in this Initial Study, the General Plan Update and its associated land use changes could potentially have harmful effects on the environment, which could affect humans either directly or indirectly. Impacts would be potentially significant, and these issues will be discussed in the EIR.

E. REFERENCES

California Department of Conservation, California Geological Survey, AQ Zapp: California Earthquake Hazards Zone Application, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed January 21, 2021.

California Department of Conservation, California Important Farmland Finder, https://maps.conservation.ca.gov/DLRP/CIFF/, accessed March 9, 2021.

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California Department of Forestry and Fire Protection (CAL FIRE), Fire and Resource Assessment Program (FRAP) Fire Hazard Severity Zone (FHSZ) Viewer, https://egis.fire.ca.gov/FHSZ/, accessed March 15, 2021.

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California Department of Transportation, California State Scenic Highway System Map, 2018, https://www.arcgis.com/apps/webappviewer/index.html?id=2e921695c43643b1aaf7000dfcc19983, accessed March 8, 2021.

California Geological Survey, Update of Mineral Land Classification for Portland Cement Concrete-Grade Aggregate in the San Gabriel Valley Production-Consumption Region, Los Angeles County, California, 2010.

California Regional Water Quality Control Board, Los Angeles Region, Order No. R4-2012-0175 as amended by State Water Board Order WQ 2015-0075 and Los Angeles Water Board Order R4-2012-0175-A01, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4, amended on September 8, 2016.

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City of Rolling Hills Estates General Plan Advisory Committee, City of Rolling Hills Estates General Plan 2020, Public Safety Element of the Rolling Hills Estates General Plan, 1992.

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City of Rolling Hills Estates, Conservation Element of the City of Rolling Hills Estates General Plan, 1992.

City of Rolling Hills Estates, Land Use Element of the City of Rolling Hills Estates General Plan, 1992.

City of Rolling Hills Estates, Open Space and Recreation Element of the City of Rolling Hills Estates General Plan, 1992.

City of Rolling Hills Estates, City Parks & Recreation, https://www.ci.rolling-hills-estates.ca.us/government/community-services/city-parks-facilities-trails, accessed March 23, 2021.

City of Rolling Hills Estates, Storm Water Pollution Prevention, https://www.ci.rolling-hills-estates.ca.us/government/public-works/storm-water-pollution-prevention, accessed April 29, 2021.

Federal Emergency Management Administration, National Flood Insurance Program, Flood Insurance Rate Map No. 06037C1919G (January 2016) and Map No. No. 06037C1940F (September 2008).

Los Angeles Regional Water Quality Control Board, Approval of the Palos Verdes Peninsula Watershed Management Group's Enhanced Watershed Management Program (EWMP), April 19, 2016; Los Angeles Regional Water Quality Control Board, Approval of Modifications to the Palos Verdes Peninsula Watershed Management Group's Enhanced Watershed Management Program, March 6, 2019.

U.S. Environmental Protection Agency, Managing Wet Weather with Green Infrastructure Municipal Handbook, EPA-833-F-08-009, December 2008.

U.S. Fish and Wildlife Service, National Wetlands Inventory (Surface Waters and Wetlands), https://www.fws.gov/wetlands/Data/Mapper.html, accessed January 21, 2021.

DEPARTMENT OF TRANSPORTATION
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Making Conservation a California Way of Life.

June 7, 2021

Jeannie Naughton, AICP
City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

RE: Rolling Hills Estates General Plan Update – Notice of Preparation of an Environmental Impact Report (NOP)
SCH # 2021050450
GTS # 07-LA-2021-03598
Vic. LA-1/PM: 15.244

Dear Jeannie Naughton:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced NOP. In 2017, the City initiated a multi-year process to update the City's 1992 General Plan, referred to as the "General Plan Update" or GPU. If adopted, this General Plan Update would be the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions through the anticipated plan horizon year of 2040. The proposed GPU will address the General Plan elements required by State law (i.e., circulation, conservation, housing, land use, noise, open space, and safety), as well as a Sustainability Element. The City of Rolling Hills Estates is the Lead Agency under the California Environmental Quality Act (CEQA).

The project, which spans the entire City, is located near several state facilities including State Route 1 (also known as the Pacific Coast Highway), Interstate 110, State Route 213, and State Route 107. From reviewing the NOP, Caltrans has the following comments.

Caltrans looks forward to reviewing the Vehicle Miles Traveled (VMT) analysis for this project. For information on determining VMT impacts on the State Highway System, see the *Technical Advisory on Evaluating Transportation Impacts in CEQA* by the California Governor's Office of Planning and Research (OPR), dated December 2018: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. The City can also refer to Caltrans' updated *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), dated May 2020 and released on Caltrans' website in July 2020: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Caltrans' new TISG is largely based on the OPR 2018 Technical Advisory.

Note that the updated TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues." Since releasing the TISG, Caltrans has released interim safety analysis guidance, dated December 2020 and found here, for the City's reference: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf.

Caltrans encourages lead agencies to complete traffic safety impact analysis in the California Environmental Quality Act (CEQA) review process so that through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

The following information is included for your consideration.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Furthermore, Caltrans encourages Lead Agencies to implement Transportation Demand Management (TDM) strategies that reduce VMT and Greenhouse Gas (GHG) emissions. Thus, Caltrans supports the City's decision to include numerous policies in the GPU that will promote the safety and capacity of pedestrian and bicycle infrastructure in the City. For more TDM options to consider including in the GPU, please refer to:

- The 2010 *Quantifying Greenhouse Gas Mitigation Measures* report by the California Air Pollution Control Officers Association (CAPCOA), available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, or
- *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8) by the Federal Highway Administration (FHWA), available at https://ops.fhwa.dot.gov/publications/fhwahop12035/index.htm.

If you have any questions about these comments, please contact Emily Gibson, the project coordinator, at Emily.Gibson@dot.ca.gov, and refer to GTS # 07-LA-2021-03598.

Sincerely,

Frances Duong

FRANCES DUONG
Acting IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse

State of California – Natural Resources Agency
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

June 21, 2021

Jeannie Naughton
City of Rolling Hills Estates, Planning Manager
4045 Palos Verdes Drive North
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Subject: Notice of Preparation of an Environmental Impact Report for the Rolling Hills Estates General Plan Update, SCH #2021050450, City of Rolling Hills Estates, Los Angeles County

Dear Ms. Naughton:

The California Department of Fish and Wildlife (CDFW) has reviewed a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) from the City of Rolling Hills Estates (City; Lead Agency) for the Rolling Hills Estates General Plan Update (Project). The NOP's supporting documents included an Initial Study. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq*.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description and Summary

Objective: The City's current General Plan dates back to 1992 and is in need of an update as new opportunities, challenges, and approaches have emerged in recent years. The General Plan Update, if adopted, would serve as the City's blueprint for development and investment through 2040.

The proposed Project will address nine General Plan elements, seven of which are required by State law (i.e., circulation, conservation, housing, land use, noise, open space, and safety). The City of Rolling Hills Estates' current land use plan consists of 10 land use categories, including four that are related to commercial development; four that correspond to residential development; one that corresponds to institutional uses; and one that relates to open space. The residential neighborhoods, parks, and recreation areas are well-established and are not expected to change during the timeline of this proposed Project. It is anticipated that the Project would adjust the land use designations of certain parcels to match their current uses, including certain open space areas and parcels built out with high-density residential uses.

In addition to citywide planning direction, the Project is expected to include focused long-range planning direction and visioning for the Commercial District. Potential changes to the Commercial District include revising development standards to reflect market needs. In addition, the Project is expected to incentivize development/redevelopment in a manner consistent with the City's vision for the Commercial District (vision to be developed as part of the Project).

Location: The City is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles. The City is bounded by the City of Rancho Palos Verdes on the west and south; the City of Rolling Hills on the south; the City of Palos Verdes Estates on the north; the City of Torrance on the north and northeast; the City of Lomita on the north and east; and unincorporated Los Angeles County on the south and southeast.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist the City in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.

Specific Comments

1) Sensitive Habitats and Open Space. Sensitive habitats/open space in the Project area is present in the form of parks and reserves, including, but not limited to, Ernie Howlett Park, South Coast Botanic Garden, Linden H. Chandler Preserve, Vista Del Norte Reserve, George F. Canyon Nature Center, Highridge Park, and the former Palos Verdes Landfill. The Project area is also adjacent to conserved lands in the neighboring City of Ranchos Palos Verdes according to the *Land Ownership* dataset available in the California Natural Diversity Database in BIOS (CDFW 2021a).

    a) CDFW recommends the City analyze and discuss the Project's direct impacts on sensitive habitats/open space within the Project area. The Project could result in loss of sensitive habitats/open space due to fuel modifications and introduction of non-native, invasive plants facilitated by the Project (collectively, indirect impacts). The EIR should

disclose the acreage of sensitive habitats and open space that would be lost as a result of the proposed Project, including all areas subject to fuel modifications and grading to accommodate development. CDFW also recommends the City analyze and discuss the Project's potential impacts on conserved lands adjacent to the Project area.

b) CDFW recommends the Project avoid developing and encroaching onto sensitive habitats/open space. Encroachment onto sensitive habitats/open space creates an abrupt transition between two different land uses. Encroachment onto sensitive habitats/open space could affect environmental and biological conditions and increase the magnitude of edge effects on biological resources (see Comment #6). CDFW recommends the EIR provide alternatives to the Project that would not result in conversion of sensitive habitats/open space into developed areas. CDFW also recommends the EIR provide alternatives that would not encroach onto sensitive habitats/open space, particularly conservation easements. Pursuant to CEQA Guidelines section 15126.6, an EIR "shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasible attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives." Furthermore, an EIR "shall include sufficient information about alternatives to allow meaningful evaluation, analysis, and comparison with the proposed project" (CEQA Guidelines, § 15126.6) (see General Comment #6).

c) If avoidance is not feasible, CDFW recommends the EIR provide measures to mitigate for impacts to sensitive habitats/open space. There should be no net loss of sensitive habitats/open space. CDFW recommends the EIR provide measures where any future development facilitated by the Project mitigates (avoids first if feasible) for project-level impacts on sensitive habitats/open space not previously identified in the EIR. CDFW recommends the EIR provide a measure where any future development facilitated by the Project establishes unobstructed vegetated buffers and setbacks. The EIR should provide standards for an effective buffer and setback; however, the buffer and setback distance should be increased at a project-level as needed. The EIR should provide justifications for the effectiveness of all proposed mitigation measures. The EIR should provide sufficient information and disclosure to facilitate meaningful public review, analysis, and comment on the adequacy of proposed mitigation measures to offset Project-related impacts on sensitive habitats/open space.

2) Fire. The Project proposes to increase development in a 'Very High' Fire Severity Zone (County of Los Angeles 2021). Development in the wildland urban interface could increase fire frequency and intensity, thus impacting biological resources. Moreover, fuel modification would need to occur within the footprint of the development site. Fuel modification would increase habitat loss. CDFW recommends the EIR provide a discussion as to how the Project may impact sensitive habitats/open space with respect to potentially intensifying land use in and/or around areas that are highly susceptible to fire.

3) Development and Conservation. To accommodate increased housing needs, the City is expected to build more units in the coming years. CDFW recommends the City maximize development where it already exists in order to protect natural lands from development and habitat loss. CDFW recommends the City consider regional and State-wide natural resource conservation strategies outlined in the following reports: Safeguarding California Plan: 2018

Update (CNRA 2018); California State Wildlife Action Plan: A Conservation Legacy for Californians (CDFW 2015); and, California 2030 Natural and Working Lands Climate Change Implementation Plan: January 2019 Draft (CalEPA et al. 2019).

4) Impacts on Wildlife Corridors and Habitat Connectivity. According to the *Natural Areas Small-California Essential Habitat Connectivity* dataset available in BIOS, the Project area supports large, relatively natural habitat blocks that support native biodiversity and areas essential for ecological connectivity between them (CDFW 2021b). The Project could impact the ecological integrity and function of wildlife corridors and steppingstones supporting resident and transient wildlife movement. Habitat fragmentation could threaten the viability of remaining natural resources. Maintaining wildlife corridors and habitat connectivity is essential for wildlife survival and is increasingly important considering habitat loss and climate change.

   a) CDFW recommends the City analyze whether the Project would impact wildlife corridors (see General Comment #5e). Impacts include (but are not limited to) habitat loss and fragmentation, narrowing of a wildlife corridor, and introduction of barriers to wildlife movement. CDFW recommends such an analysis be supported by studies to document wildlife activity and movement through Project area where development is proposed. Technical detail such as data, maps, diagrams, and similar relevant information should be provided to permit full assessment if significant environmental impacts by reviewing agencies and members of the public (CEQA Guidelines, §15147).

   b) CDFW recommends the Project avoid developing and encroaching onto wildlife corridors. If avoidance is not feasible, CDFW recommends the EIR provide measures to mitigate for the Project's significant impacts on wildlife corridors (see General Comments #9 and #10). CDFW also recommends the EIR provide measures where any future development facilitated by the Project mitigates (avoids first if feasible) for project-level impacts on wildlife corridors not previously identified in the EIR.

5) Impacts on Wildlife. The Project's potential to increase development in the wildland urban interface could impact wildlife. Impacts could result from increased human presence, traffic, noise, and artificial lighting. Increased human-wildlife interactions could lead to wildlife injury or mortality. For example, as human population and communities expand into wildland areas, there has been a commensurate increase in direct and indirect interaction between mountain lions and people (CDFW 2013). As a result, the need to relocate or humanely euthanize mountain lions (depredation kills) may increase for public safety.

   CDFW recommends City analyze whether the Project may have direct and indirect impacts wildlife resulting from increased human presence, traffic, noise, and artificial lighting (also see General Comment #5e). An assessment of impacts on wildlife should also provide a discussion of edge effects, including (but not limited to) introduction and invasion of non-native plant species into natural areas; attraction for wildlife with food or backyard conditions; predation and disease by domestic animals; and habitat fragmentation caused by volunteer trails.

6) Coastal California Gnatcatcher. The Project area contains critical habitat for the coastal California gnatcatcher (*Polioptila californica californica*), a California Species of Special

Concern (SSC) and a species listed as threatened under the Endangered Species Act (ESA) (USFWS 2021a). CDFW recommends the EIR discuss the Project's potential impacts on coastal California gnatcatcher and habitat. The EIR should provide measures to avoid those impacts or measures to mitigate for impacts if avoidance is not feasible.

7) Additional Sensitive and Special Status Species. The Palos Verdes Peninsula supports additional sensitive and special status species. CDFW recommends the EIR discuss the Project's potential impacts on the following species and habitat: cactus wren (*Campylorhynchus brunneicapillus);* El Segundo blue butterfly (*Euphilotes battoides allyni*) listed as endangered under ESA; and Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) also listed as endangered under ESA; and the Monarch butterfly-California overwintering population (*Danaus plexippus*). In California, monarchs are included on the CDFW's Terrestrial and Vernal Pool Invertebrates of Conservation Priority list and identified as a Species of Greatest Conservation Need in the State Wildlife Action Plan (CDFW 2017, CDFW 2015).

8) Jurisdictional Waters. According to U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory, there are multiple segments of streams running through the Project area (USFWS 2021b).

   a) CDFW recommends the City identify and delineate all streams within the Project area and provide a discussion of the Project's potential impacts on streams. Modifications to a river, creek, or stream in one area may result in bank erosion, channel incision, or drop in water level along that stream outside of the immediate impact area. Therefore, CDFW recommends the EIR discuss whether impacts on streams within the Project area would impact those streams immediately outside of the Project area where there is hydrologic connectivity. Potential impacts such as changes to drainage pattern, runoff, and sedimentation should be discussed.

   b) CDFW recommends the Project avoid impacting streams and associated vegetation. Herbaceous vegetation, woody vegetation, and woodlands adjacent to streams serve to protect the integrity of these resources and help maintain natural sedimentation processes. Where development may occur near a stream but may avoid impacts, the EIR should provide a justification as to why the chosen setback distance of the proposed development(s) would be effective to avoid impacts on streams and associated vegetation. Furthermore, CDFW recommends the EIR provide minimum standards for effective unobstructed vegetated buffers and setbacks adjoining streams and associated vegetation for all development facilitated by the Project. The buffer and setback distance should be increased at a project-level as needed. The EIR should provide justification for the effectiveness of chosen buffer and setback distances.

   c) If avoidance is not feasible, the EIR should include measures where future housing development facilitated by the Project provides the following:

      - A stream delineation and analysis of impacts. The delineation should be conducted pursuant to the to the USFWS wetland definition adopted by CDFW (Cowardin et al. 1979). Be advised that some wetland and riparian habitats subject to CDFW's authority may extend beyond the jurisdictional limits of the

U.S. Army Corps of Engineers' Section 404 permit and Regional Water Quality Control Board Section 401 Certification;

- A Lake and Streambed Alteration (LSA) Notification to CDFW pursuant to Fish and Game Code Section 1600 *et seq.* if applicable. As a Responsible Agency under CEQA, CDFW has authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream or use material from a streambed. For any such activities, the project applicant (or "entity") must notify CDFW. CDFW's issuance of a LSA Agreement for a project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the environmental document of the local jurisdiction (Lead Agency) for the Project. To minimize additional requirements by CDFW pursuant to section 1600 *et seq.* and/or under CEQA, the environmental document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the LSA Agreement. Please visit CDFW's Lake and Streambed Alteration Program webpage for more information (CDFW 2021c).

- As part of the LSA Notification process, CDFW requests a hydrological evaluation of the 100-year storm event to provide information on how water and sediment is conveyed through the Project area. Additionally, the hydrological evaluation should assess the 100, 50, 25, 10, 5, and 2-year frequency flood events to evaluate existing and proposed conditions and erosion/scour potential. CDFW recommends the project-level CEQA document discuss the results and address avoidance, minimization, and/or mitigation measures that may be necessary to reduce potential significant impacts.

9) Los Angeles County Significant Ecological Areas (SEAs). The Project area contains or is adjacent to lands that are a part of the Palos Verdes Peninsula and Coastline SEA. Los Angeles County Significant Ecological Areas are officially designated areas within Los Angeles County identified as having irreplaceable biological resources (LACDRP 2019). These areas represent the wide-ranging biodiversity of Los Angeles County and contain some of Los Angeles County's most important biological resources. Therefore, CDFW recommends the EIR provide a discussion of Project impacts on the Palos Verdes Peninsula and Coastline SEA.

10) Nesting Birds. The Project may impact nesting birds and raptors as a result of development facilitated by the Project. Project activities occurring during the bird and raptor breeding and nesting season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

    a) Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or

needlessly destroy the nest or eggs of any raptor.

b) CDFW recommends that measures be taken to fully avoid impacts to nesting birds and raptors. CDFW recommends the EIR include a measure where future development facilitated by the Project avoids ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal during the avian breeding season which generally runs from February 15 through September 15 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs.

c) If impacts to nesting birds and raptors cannot be avoided, CDFW recommends the EIR include measures where future development facilitated by the Project mitigates for impacts. CDFW recommends surveys by a qualified biologist with experience conducting breeding bird and raptor surveys. Surveys are needed to detect protected native birds and raptors occurring in suitable nesting habitat that may be disturbed and any other such habitat within 300 feet of the Project disturbance area, to the extent allowable and accessible. For raptors, this radius should be expanded to 500 feet and 0.5 mile for special status species, if feasible. Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

11) Loss of Bird and Raptor Nesting and Breeding Habitat. Coastal sage scrub habitat in the Palos Verdes Peninsula supports nesting birds, including sensitive and special status species. Development occurring adjacent to the wildlife urban interface and habitats such as coastal sage scrub could impact nesting and breeding habitat for birds and raptors. Direct impacts such as habitat loss and indirect impacts such as increased edge effects could eliminate habitat or reduce habitat quality.

a) CDFW recommends the EIR analyze and discuss the Project's impacts on bird and raptor nesting and breeding habitat. Edge effects should also be analyzed and discussed (see Comment #6). CDFW recommends the EIR disclose the amount of bird and raptor nesting and breeding habitat that would be impacted and lost as a result of the proposed Project.

b) CDFW recommends the Project avoid developing and encroaching onto nesting and breeding habitat for birds and raptors. If avoidance is not feasible, CDFW recommends the EIR provide measures to mitigate for impacts on bird and raptor nesting and breeding habitat. Depending on the status of the bird or raptor species impacted, replacement habitat acres should increase with the occurrence of a Species of Special Concern. Replacement habitat acres should further increase with the occurrence of a CESA-listed threatened or endangered species.

c) CDFW recommends the EIR provide measures where future development facilitated by the Project avoids removal of any native trees, large and dense-canopied native and non-native trees, and trees occurring in high density. CDFW also recommends avoiding impacts to understory vegetation (e.g., ground cover, subshrubs, and shrubs). If trees are removed, CDFW recommends future development facilitated by the Project provides replacement to compensate for temporal or permanent loss habitat within a project site. CDFW recommends planting native tree and shrub species preferred by birds and are

native to the area.

12) Bats. Canyons, abandoned structures, and areas where there are large, dense canopied trees in the Project area could provide roosting and foraging habitat for bats.

a) Bats are considered non-game mammals and are afforded protection by State law from take and/or harassment (Fish & G. Code, § 4150; Cal. Code of Regs., § 251.1). Additionally, some bats are SSC. CEQA provides protection not only for CESA-listed species, but for any species including but not limited to SSC which can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Take of SSC could require a mandatory finding of significance (CEQA Guidelines, § 15065).

b) CDFW recommends the EIR discuss whether the Project could impact bats. Project construction and activities, including (but not limited to) ground disturbance, vegetation removal, and any activities leading to increased noise levels may have direct and/or indirect impacts on bats and roosts. Accordingly, CDFW recommends the EIR provide measures where future development facilitated by the Project avoids potential impacts on bats. CDFW recommends the EIR provide measures where future development facilitated by the Project provides surveys for bats and roosts. The project-level environmental document should disclose and discuss potential impacts on bats/roosts. If necessary, to reduce impacts to less than significant, the project-level environmental document should provide bat-specific avoidance and/or mitigation measures [CEQA Guidelines, § 15126.4(a)(1)].

General Comments

1) Disclosure. An environmental document should provide an adequate, complete, and detailed disclosure about the effect which a proposed project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, §15151). Adequate disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to plant and wildlife species impacted (e.g., current range, distribution, population trends, and connectivity).

2) Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Pursuant to CEQA Guidelines section 15126.4, an environmental document "shall describe feasible measures which could mitigate for impacts below a significant level under CEQA."

a) Level of Detail. Mitigation measures must be feasible, effective, implemented, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, § 15126.4). A public agency "shall provide the measures that are fully enforceable through permit conditions, agreements, or other measures" (Pub. Resources Code, § 21081.6). CDFW recommends that the City provide mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented

successfully via a mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). Adequate disclosure is necessary so CDFW may provide comments on the adequacy and feasibility of proposed mitigation measures.

b) Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the environmental document should include a discussion of the effects of proposed mitigation measures [CEQA Guidelines, § 15126.4(a)(1)]. In that regard, the environmental document should provide an adequate, complete, and detailed disclosure about a project's proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.

3) Biological Baseline Assessment. An adequate biological resources assessment should provide a complete assessment and impact analysis of the flora and fauna within and adjacent to a project site and where a project may result in ground disturbance. The assessment and analysis should place emphasis upon identifying endangered, threatened, sensitive, regionally, and locally unique species, and sensitive habitats. Impact analysis will aid in determining any direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to a project. CDFW also considers impacts to California Species of Special Concern a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. An environmental document should include the following information:

a) Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)]. An environmental document should include measures to fully avoid and otherwise protect Sensitive Natural Communities from project-related impacts. CDFW considers these communities as threatened habitats having both regional and local significance. Plant communities, alliances, and associations with a state-wide ranking of S1, S2, and S3 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting the Vegetation Classification and Mapping Program - Natural Communities webpage (CDFW 2021d);

b) A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). Adjoining habitat areas should be included where project construction and activities could lead to direct or indirect impacts off site;

c) Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at a project site and within the neighboring vicinity. The Manual of California Vegetation (MCV), second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2009). Adjoining habitat areas should be included in this assessment where project activities could lead to direct or indirect impacts off site. Habitat mapping at the alliance level will help establish baseline vegetation conditions;

d) A complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by a project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat (CDFW 2021e). An assessment should include a nine-quadrangle search of the CNDDB to determine a list of species potentially present at a project site. A lack of records in the CNDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur in the project site. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review [CEQA Guidelines, § 15003(i)];

e) A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including California Species of Special Concern and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of a project site should also be addressed such as wintering, roosting, nesting, and foraging habitat. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's Survey and Monitoring Protocols and Guidelines for established survey protocol for select species (CDFW 2021f). Acceptable species-specific survey procedures may be developed in consultation with CDFW and the USFWS; and,

f) A recent wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of a proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame or in phases.

4) Data. CEQA requires that information developed in environmental impact reports be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected by completing and submitting CNDDB Field Survey Forms (CDFW 2021g). The City should ensure data collected for the preparation of any Project-related environmental document be properly submitted, with all data fields applicable filled out. The data entry should also list pending development as a threat and then update this occurrence after impacts have occurred.

5) Biological Direct, Indirect, and Cumulative Impacts. CDFW recommends providing a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. The EIR should address the following:

a) A discussion regarding Project-related indirect impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands [e.g., preserve lands associated with a Natural Community Conservation Plan (Fish & G.

Code, § 2800 et. seq.)]. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the EIR;

b) A discussion of both the short-term and long-term effects to species population distribution and concentration and alterations of the ecosystem supporting the species impacted [CEQA Guidelines, § 15126.2(a)];

c) A discussion of potential adverse impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures;

d) A discussion of Project-related changes on drainage patterns; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and, post-Project fate of runoff from the Project sites. The discussion should also address the potential water extraction activities and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included;

e) An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the EIR; and,

f) A cumulative effects analysis, as described under CEQA Guidelines section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant and wildlife species, habitat, and vegetation communities. If the City determines that the Project would not have a cumulative impact, the environmental document should indicate why the cumulative impact is not significant. The City's conclusion should be supported by facts and analyses [CEQA Guidelines, § 15130(a)(2)].

6) Project Description and Alternatives. To enable CDFW to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the EIR:

a) A complete discussion of the purpose and need for, and description of, the proposed Project, including all staging areas; access routes to the construction and staging areas; fuel modification footprint; and grading footprint;

b) Pursuant to CEQA Guidelines section 15126.6(a), an environmental document "shall describe a reasonable range of potentially feasible alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project." CEQA Guidelines section 15126.6(f)(2) states if the Lead Agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include reasons in the environmental document; and,

c) A range of feasible alternatives to the Project location and design features to avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas. CDFW recommends the City consider configuring Project construction and activities, as well as the development footprint, in such a way as to fully avoid impacts to sensitive and special status plants and wildlife species, habitat, and sensitive vegetation communities. CDFW also recommends the City consider establishing appropriate setbacks from sensitive and special status biological resources. Setbacks should not be impacted by ground disturbance or hydrological changes for the duration of the Project and from any future development. As a general rule, CDFW recommends reducing or clustering the development footprint to retain unobstructed spaces for vegetation and wildlife and provide connections for wildlife between properties and minimize obstacles to open space.

   Project alternatives should be thoroughly evaluated, even if an alternative would impede, to some degree, the attainment of the Project objectives or would be more costly (CEQA Guidelines, § 15126.6).

d) Where the Project may impact aquatic and riparian resources, CDFW recommends the City consider alternatives that would fully avoid impacts to such resources. CDFW also recommends alternatives that would allow not impede, alter, or otherwise modify existing surface flow; watercourse and meander; and water-dependent ecosystems and vegetation communities. Project-related designs should consider elevated crossings to avoid channelizing or narrowing of streams. Any modifications to a river, creek, or stream may cause or magnify upstream bank erosion, channel incision, and drop in water level and cause the stream to alter its course of flow.

7) CESA. CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. As to CESA, take of any endangered, threatened, candidate species, or CESA-listed plant species that results from the Project is prohibited, except as authorized by state law (Fish & G. Code §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9). Consequently, if the Project or any Project-related activity will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

8) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of moving an individual from a project site and permanently moving it to a new location. CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable impacts to rare, threatened, or endangered plant

or animal species. Studies have shown that these efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving sensitive plants and animals and their habitats.

9) Compensatory Mitigation. An environmental document should include mitigation measures for adverse project-related direct or indirect impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the Lead Agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

10) Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, an environmental document should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

Conclusion

We appreciate the opportunity to comment on the NOP for the Rolling Hills Estates General Plan Update to assist the City of Rolling Hills Estates in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Ruby Kwan-Davis, Senior Environmental Scientist (Specialist), at Ruby.Kwan-Davis@wildlife.ca.gov or (562)-619-2230.

Sincerely,

DocuSigned by:
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Erinn Wilson-Olgin
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CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov
State Clearinghouse, Sacramento – State.Clearinghouse@opr.ca.gov

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LOS ANGELES COUNTY
SANITATION DISTRICTS
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Robert C. Ferrante
Chief Engineer and General Manager
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June 17, 2021

Ref. DOC 6180603

Ms. Jeannie Naughton, AICP
Planning Manager
City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

Dear Ms. Naughton:

NOP Response for City of Rolling Hills General Plan Update

The Los Angeles County Sanitation Districts (Districts) received a Notice of Preparation of a Draft Environmental Impact Report (NOP) for the subject project on May 19, 2021. The City of Rolling Hills Estates is located within the jurisdictional boundaries of the South Bay Cities Sanitation District and District No. 5. We offer the following comments regarding sewerage service:

1. The Districts own, operate, and maintain the large trunk sewers that form the backbone of the regional wastewater conveyance system. Local collector and/or lateral sewer lines are the responsibility of the jurisdiction in which they are located. As such, the Districts cannot comment on any deficiencies in the sewerage system in the City of Rolling Hills Estates (City) except to state that presently no deficiencies exist in Districts' facilities that serve the City. For information on deficiencies in the City sewerage system, please contact the City Department of Public Works and/or the Los Angeles County Department of Public Works.

2. The wastewater generated by the City is treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a capacity of 400 million gallons per day (mgd) and currently processes an average flow of 259.6 mgd.

3. In order to estimate the volume of wastewater a project will generate, go to www.lacsd.org, under Services, then Wastewater Program and Permits, select Will Serve Program, and scroll down to click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

4. The Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is used by the Districts to upgrade or expand the Sewerage System. Payment of a connection fee may be required before a project is permitted to discharge to the Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees, the Districts will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, the developer should contact the Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise the developer that the Districts intend to provide this service up to the levels that are legally permitted and to inform the developer of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717 or at araza@lacsd.org.

Very truly yours,

Adriana Raza

Adriana Raza
Real Property Agent
Facilities Planning Department

AR:ar

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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May 24, 2021

Jeannie Naughton
City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

Re: 2021050450, Rolling Hills Estates General Plan Update Project, Los Angeles County

Dear Ms. Naughton:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

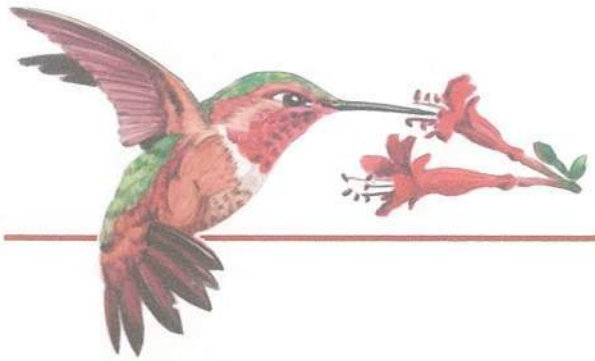
If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse



Palos Verdes / South Bay Audubon

PO Box 2582, Palos Verdes, CA 90274
info@pvsb-audubon.org www.pvsb-audubon.org

June 21, 2021

Jeannie Naughton, AICP, Planning Manager
City of Rolling Hills Estates
4045 Palos Verdes Drive North
Rolling Hills Estates, CA 90274

Re: Comments

The Palos Verdes / South Bay Audubon Chapter (Audubon) believes that the City of Rolling Hills Estates (RHE) has an opportunity to plan for enhanced habitat and wildlife resources within the city boundaries in its Environmental Impact Report (EIR). High quality habitat containing diverse local native plants and wildlife will support a diverse array of birds in our local community.

Enhancing and expanding habitat, wildlife, and bird resources are actions consistent with national goals for addressing Climate Change and conserving land. Goals set by President Biden's Executive Order 14008, as published in the Federal Register (https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad) include conserving at least 30 % of our lands and waters by 2030 (30 by 2030, see Section 216), should be addressed in the RHE's EIR. Audubon believes that opportunity abounds within RHE for meeting this goal. We note that much of the land in RHE has been covered with non-native plants, it is possible to retain iconic species, such as pepper trees, while in-filling with local native plants. Increased CO_2 sequestration can be achieved through with the addition of native plants.

Audubon believes that there are multiple opportunities within the city boundaries to improve habitat for supporting birds and other wildlife within the urban landscape. The benefits of bringing wildlife into a community are numerous.

Examples of opportunities include:

- Two special status species reside in RHE that will benefit from increased native habitat:
  - California gnatcatcher (*Polioptila californica*), a federally listed threatened species that is currently found at the Linden H. Chandler Preserve and found in habitat areas containing California sagebrush (*Artemisia Californica*), its host plant that the bird uses for nesting.
  - Palos Verdes blue butterfly (*Glaucophsyche lygdamus palosverdesensis*) a federally listed endangered butterfly that provides prey for insectivores, like the California gnatcatcher.
- Institutions being considered for mixed use, such as adding housing at the Dapple Gray Elementary School, can be landscaped with local native plant species that will help conserve water while providing much needed habitat for local fauna like the California gnatcatcher and Palos Verdes blue butterfly.
- Homeowners and business owners can be encouraged to landscape with local native plants for part or all of their property through incentives to benefit local birds and other fauna (think bird food); and

- The City of Rolling Hills Estates can identify small and larger parcels of land to convert to local native plants. Examples include:
    - Areas along trails, such as Phillips Canyon and Strawberry Trails, can be planted with local native plants to provide additional habitat while sequestering CO_2.
    - Areas existing along roadways, such as Palos Verdes Drive North, can also be landscaped with local native plants to support 30 by 2030 goals and CO_2 sequestration.
    - Utilize contemporary fire modification practices that provide for the installation of slower burning native plants in lower densities while still providing for local birds.

The Palos Verdes / South Bay Audubon Chapter looks forward to participating with the City of Rolling Hills Estates in this project and with developing the EIR for the City's next City Plan. We have experts that can provide the City with information to help implement plans based upon the appropriate species for all the native birds.

Sincerely,

David Quadhamer

David Quadhamer
President

SCAG
INNOVATING FOR A BETTER TOMORROW

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June 21, 2021

Ms. Jeannie Naughton, AICP, Planning Manager
City of Rolling Hills
4045 Palos Verdes Drive North
Rolling Hills Estates, California 90274
Phone: (310) 377-1577 ext. 115
E-mail: JeannieN@rollinghillsestatesca.gov

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the City of Rolling Hills Estates General Plan Update [SCAG NO. IGR10408]

Dear Ms. Naughton,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the City of Rolling Hills Estates General Plan Update ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is responsible for providing informational resources to regionally significant plans, projects, and programs per the California Environmental Quality Act (CEQA) to facilitate the consistency of these projects with SCAG's adopted regional plans, to be determined by the lead agencies.[1]

Pursuant to Senate Bill (SB) 375, SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS). SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) goals and align with RTP/SCS policies. Finally, SCAG is also the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the City of Rolling Hills Estates General Plan Update in Los Angeles County. The proposed project includes a General Plan Update (GPU) to address emerging issues and community priorities, ensure compliance with State law, and revise implementing policy frameworks to focus on present and future goals and policy objectives. The proposed GPU will include an update to the Housing Element and add a new Sustainability Element.

When available, please email environmental documentation to *IGR@scag.ca.gov* providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Anita Au, Senior Regional Planner, at (213) 236-1874 or IGR@scag.ca.gov. Thank you.

Sincerely,

Rongsheng Luo
Acting Manager, Compliance and Performance Monitoring

[1] Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2020 RTP/SCS (Connect SoCal) for the purpose of determining consistency for CEQA.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CITY OF ROLLING HILLS ESTATES GENERAL PLAN UPDATE [SCAG NO. IGR10408]

CONSISTENCY WITH CONNECT SOCAL

SCAG provides informational resources to facilitate the consistency of the proposed project with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with Connect SoCal.

CONNECT SOCAL GOALS

The SCAG Regional Council fully adopted Connect SoCal in September 2020. Connect SoCal, also known as the 2020 – 2045 RTP/SCS, builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in Connect SoCal may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project. Among the relevant goals of Connect SoCal are the following:

SCAG CONNECT SOCAL GOALS	
Goal #1:	*Encourage regional economic prosperity and global competitiveness*
Goal #2:	*Improve mobility, accessibility, reliability and travel safety for people and goods*
Goal #3:	*Enhance the preservation, security, and resilience of the regional transportation system*
Goal #4:	*Increase person and goods movement and travel choices within the transportation system*
Goal #5:	*Reduce greenhouse gas emissions and improve air quality*
Goal #6:	*Support healthy and equitable communities*
Goal #7:	*Adapt to a changing climate and support an integrated regional development pattern and transportation network*
Goal #8:	*Leverage new transportation technologies and data-driven solutions that result in more efficient travel*
Goal #9:	*Encourage development of diverse housing types in areas that are supported by multiple transportation options*
Goal #10:	*Promote conservation of natural and agricultural lands and restoration of habitats*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG CONNECT SOCAL GOALS		
	Goal	Analysis
Goal #1:	*Encourage regional economic prosperity and global competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
Goal #2:	*Improve mobility, accessibility, reliability and travel safety for people and goods*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

Connect SoCal Strategies

To achieve the goals of Connect SoCal, a wide range of land use and transportation strategies are included in the accompanying twenty (20) technical reports. Of particular note are multiple strategies included in Chapter 3 of Connect SoCal intended to support implementation of the regional Sustainable Communities Strategy (SCS) framed within the context of focusing growth near destinations and mobility options; promoting diverse housing choices; leveraging technology innovations; supporting implementation of sustainability policies; and promoting a Green Region. To view Connect SoCal and the accompanying technical reports, please visit the Connect SoCal webpage. Connect SoCal builds upon the progress from previous RTP/SCS cycles and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that helps the SCAG region strive towards a more sustainable region, while meeting statutory requirements pertinent to RTP/SCSs. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

Regarding the new Sustainability Element, SCAG staff would like to call your attention to resources available from SCAG's Regional Climate Adaptation Framework including the Southern California Climate Adaptation Planning Guide, Communication and Outreach Toolkit, Library of Model Policies, and SB 379 Compliance Curriculum for Local Jurisdictions.

DEMOGRAPHICS AND GROWTH FORECASTS

A key, formative step in projecting future population, households, and employment through 2045 for Connect SoCal was the generation of a forecast of regional and county level growth in collaboration with expert demographers and economists on Southern California. From there, jurisdictional level forecasts were ground-truthed by subregions and local agencies, which helped SCAG identify opportunities and barriers to future development. This forecast helps the region understand, in a very general sense, where we are expected to grow, and allows SCAG to focus attention on areas that are experiencing change and may have increased transportation needs. After a year-long engagement effort with all 197 jurisdictions one-on-one, 82 percent of SCAG's 197 jurisdictions provided feedback on the forecast of future growth for Connect SoCal. SCAG also sought feedback on potential sustainable growth strategies from a broad range of stakeholder groups – including local jurisdictions, county transportation commissions, other partner agencies, industry groups, community-based organizations, and the general public. Connect SoCal utilizes a bottom-up approach in that total projected growth for each jurisdiction reflects feedback received from jurisdiction staff, including city managers, community development/planning directors, and local staff. Growth at the neighborhood level (i.e., transportation analysis zone (TAZ) reflects entitled projects and adheres to current general and specific plan maximum densities as conveyed by jurisdictions (except in cases where entitled projects and development agreements exceed these capacities as calculated by SCAG). Neighborhood level growth projections also feature strategies that help to reduce greenhouse gas emissions (GHG) from automobiles and light trucks to achieve

Southern California's GHG reduction target, approved by the California Air Resources Board (CARB) in accordance with state planning law. Connect SoCal's Forecasted Development Pattern is utilized for long range modeling purposes and does not supersede actions taken by elected bodies on future development, including entitlements and development agreements. SCAG does not have the authority to implement the plan -- neither through decisions about what type of development is built where, nor what transportation projects are ultimately built, as Connect SoCal is adopted at the jurisdictional level. Achieving a sustained regional outcome depends upon informed and intentional local action. To access jurisdictional level growth estimates and forecasts for years 2016 and 2045, please refer to the Connect SoCal Demographics and Growth Forecast Technical Report. The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts				Adopted City of Rolling Hills Estates Forecasts			
	Year 2020	**Year 2030**	**Year 2035**	**Year 2045**	**Year 2020**	**Year 2030**	**Year 2035**	**Year 2045**
Population	19,517,731	20,821,171	21,443,006	22,503,899	8,106	8,250	8,325	8,476
Households	6,333,458	6,902,821	7,170,110	7,633,451	2,949	3,040	3,081	3,159
Employment	8,695,427	9,303,627	9,566,384	10,048,822	7,144	7,285	7,356	7,585

MITIGATION MEASURES

SCAG staff recommends that you review the Final Program Environmental Impact Report (Final PEIR) for Connect SoCal for guidance, as appropriate. SCAG's Regional Council certified the PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on May 7, 2020 and also adopted a PEIR Addendum and amended the MMRP on September 3, 2020 (please see the PEIR webpage and scroll to the bottom of the page for the PEIR Addendum). The PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

REGIONAL HOUSING NEEDS ALLOCATION

On March 4, 2021 SCAG's Regional Council adopted the 6th cycle Final Regional Housing Needs Assessment (RHNA) Allocation Plan which covers the planning period October 2021 through October 2029. The 6th cycle Final RHNA allocation for the applicable jurisdiction is below.

SCAG 6th Cycle Final RHNA Allocation for City of Rolling Hills Estates	
Very low income	82
Low income	42
Moderate income	38
Above moderate income	29
Total RHNA Allocation	191

Sixth cycle housing elements are due to the California Department of Housing and Community Development (HCD) by October 15, 2021. SCAG encourages jurisdictions to prepare the draft housing element in advance of the due date to ensure adequate time to address HCD comments and adopt a final housing element. Jurisdictions that do not have a compliant housing element may be ineligible for certain State funding and grant opportunities and may be at risk for legal action from stakeholders or HCD.

South Coast
Air Quality Management District
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SENT VIA E-MAIL: June 15, 2021

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City of Rolling Hills Estates, Planning Department
4045 Palos Verdes Drive North
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Notice of Preparation of a Draft Environmental Impact Report for the City of Rolling Hills Estates General Plan Update (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send a copy of the Draft EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website[1] as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod[2] land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds[3] and localized significance thresholds (LSTs)[4] to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and

[1] South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.
[2] CalEEMod is available free of charge at: www.caleemod.com.
[3] South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.
[4] South Coast AQMD's guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment[5].

The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective*[6] is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process with additional guidance on strategies to reduce air pollution exposure near high-volume roadways available in CARB's technical advisory[7].

The South Coast AQMD's *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*[8] includes suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health. It is recommended that the Lead Agency review this Guidance Document as a tool when making local planning and land use decisions.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook[1], South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan[9], and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy[10].

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

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Control Number

[5] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.
[6] CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* can be found at: http://www.arb.ca.gov/ch/handbook.pdf.
[7] CARB's technical advisory can be found at: https://www.arb.ca.gov/ch/landuse.htm.
[8] South Coast AQMD. 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. Available at: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.
[9] South Coast AQMD's 2016 Air Quality Management Plan can be found at: http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf (starting on page 86).
[10] Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocal.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

APPENDIX B

Assumptions and Calculations for the Development of the Buildout Scenarios

Table 1: Scenario-1 Baseline

Land Use Designation	Maximum Allowed Density (DU/acre)	Maximum Intensity (FAR)	Area (acre)	Area (%)	Existing Units (DU)	Existing Commercial/ Office (SF)	Expected Units	Expected Commercial/Office (SF)	At Buildout
Very Low Density Residential	1		39	2.0%	32	0	32		
Low Density Residential [a]	2		874	44.7%	1,840	0	1,841		1
Medium Density Residential	4		166	8.5%	551	0	551		
High Density Residential	8		102	5.2%	644	0	644		
Commercial General		3	93	4.8%	232	1,495,462	232	1,495,462	
Commercial Office		1	2	0.1%	0	40,000	0	40,000	
Neighborhood Commercial		4	6	0.3%	35	23,856	35	23,856	
Commercial Recreation		N/A	307	15.7%	3		3		
Open Space		N/A	237	12.1%	0	35,995	0	35,995	
Institutional		1	128	6.6%	0		0		
TOTALS			**1,954**	**100%**	**3,337**	**1,595,313**	**3,338**	**1,595,313**	**1**

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS

DU = dwelling unit
FAR = floor area ratio
SF = square feet
N/A = not applicable

[a] There is only one vacant parcel, and the scenario assumes buildout of that parcel. The scenario doesn't assume any change in the mixed-use areas (Commercial General and Neighborhood Commercial)

Table 2: Scenario-2 (Low Range Development Scenario) and Scenario-3 (High Range Development Scenario)

Land Use Designation	Maximum Allowed Density (DU/acre)	Maximum Intensity (FAR)	Area (acre)	Area (%)	Existing Units (DU)	Existing Commercial/ Office (SF)	Low Range Expected Additional New Units (DU)	High Range Expected Additional New Units (DU)	Low Range Non-Residential At Buildout (SF)	High Range Non-Residential At Buildout (SF)	Low Range Total Residential Units At Buildout (DU)	High Range Total Residential Units At Buildout (DU)	Low Range Population Increase (persons)	High Range Population Increase (persons)	Low Range Employment Loss (employees)	High Range Employment Loss (employees)
Very Low Density Residential	1		39	2.0%	32	0					32	32	0	0	0	0
Low Density Residential [a]	2		874	44.7%	1,840	0	1	301			1,841	2,141	4	679	0	0
Medium Density Residential	4		166	8.5%	551	0					551	551	0	0	0	0
High Density Residential	8		102	5.2%	679	0					679	679	0	0	0	0
Commercial General [b]	30 to 45	2.5	93	4.8%	232	1,495,462	643	1,458	1,274,371	1,362,807	875	1,690	1,179	2,673	-610	-263
Commercial Office [c]	22	1.0	2	0.1%	0	40,000	52	78	15,486	15,486	52	78	96	143	-63	-63
Neighborhood Commercial [d]	22	0.4	6	0.3%	3	23,856	86	129	32,735	32,735	89	132	193	290	-17	-17
Commercial Recreation		0.25 to 0.75	307	15.7%	0	35,995			35,995	35,995	0	0	0	0	0	0
Open Space		na	237	12.1%	0						0	0	0	0	0	0
Institutional [f]	1 to 2	0.3	128	6.6%	0		96	192			96	192	216	432	0	0
TOTALS			**1,954**	**100%**	**3,337**	**1,595,313**	**878**	**2,158**	**1,358,587**	**1,447,023**	**4,215**	**5,495**	**1,688**	**4,217**	**-690**	**-343**

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

[a] DU = dwelling unit
FAR = floor area ratio
SF = square feet

[b] Assumes build out of one vacant parcel in low range. Assumes builfout of one vacant parcel and ADUs in high range. Refer to Table 3: Low-Density Residential and ADUs.

[c] Refer to Table 4: Commercial General (with Commercial District Mixed-Use Overlay) Summary.

[d] Refer to Table 6 Commercial Office with Mixed-Use Overlay

[e] Refer to **Error! Not a valid result for table.**

[f] Refer to **Error! Not a valid result for table.**

Table 3: Low-Density Residential and ADUs

Vacant Parcels	1 parcel
ADUs Built per Year (Low)[a]	0 du
ADUs Built per Year (High)[b]	15 du
Plan Years	20 years
Residential Units Including ADUs (Low)	1 du
Residential Units Including (High)	301 du
Population Increase (Low)[c]	4 persons
Population Increase (High)[d]	679 persons

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

ADU = accessory dwelling units
du = dwelling units

[a] Assumes zero ADUs per year in the low range. The current trend is 0 to 4 ADUs per year but the City of Rolling Hills Estates received 12 applications in 2020.

[b] Assumes 15 ADUs per year in the high range. The current trend is 0 to 4 ADUs per year, but the City of Rolling Hills Estates received 12 applications in 2020. ADU program is also being developed by Rolling Hills Estates.

[c] Assumes 3.5 persons/du for one Single Family Residential unit (Source: City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1).

[d] Assumes 3.5 persons/du for one Single Family Residential unit and 2.25 persons/du for 300 ADUs. ADUs use the same rate as Multi-Family Residential (Source: City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1)

Table 4: Commercial General (with Commercial District Mixed-Use Overlay) Summary

Commercial District Area (Acres)	93 acres
Acreage Targeted for Development/Redevelopment (Anticipated Mixed-Use) [a]	28.58 acres
Percent of Land Expected for Development/Redevelopment in the Commercial District	31%
Total Existing Square Footage of Development	1,495,462 SF
Promenade Mall Land Area[b]	6.98 acres
Existing Development on Promenade Mall[c]	285,832 SF
Existing Development per Acre in Rest of Commercial District[d]	14,062 SF/acre
Development Rate[e]	75%
Estimated Existing Non-Residential Square Footage in Acreage Targeted for Development/Redevelopment[f]	442,182 SF
New Commercial Development Rate (Low)[g]	50%
New Commercial Development Rate (High)[g]	70%
New Commercial Development Square Footage (Low) [h]	221,091 SF
New Commercial Development Square Footage (High)[h]	309,527 SF
Residential Density (Low)[i]	30 du/ac
Residential Density (High) [j]	68 du/ac
Residential Units (Low)	643 du

Residential Units (High)	1,458 du
Population Increase (Low)[k]	1,179 persons
Population Increase (High)[k]	2,673 persons
Employment Loss (Low)[l]	-610 employees
Employment Loss (High)[l]	-263 employees

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

SF = square feet
du/ac = dwelling unit/acre
du = dwelling unit

[a] Includes five sites in Commercial District that are ripe for redevelopment or have developer's interest totaling 28.58 acres. The development on these sites is assumed to be mixed-use development using the Commercial District Mixed-Use Overlay.

[b] Promenade Mall has a disproportionately higher development rate than the rest of the Commercial District. Hence existing development square footage is calculated separately for the Promenade Mall by removing the existing vacancy at the Promenade Mall. See Note C below.

[c] Promenade Mall currently has a 30 to 35 percent vacancy rate. Existing square footage excludes the 35 percent vacancy (439,742 SF * 0.65).

[d] A development rate per acre is calculated for the rest of the Commercial District (Excluding Promanade mall). (Total Existing Square Footage of Development – Existing Development on Promenade Mall)/ Commercial District Area - Promenade Mall Land Area) leading to 14,062 SF per acre of development.

[e] Most of the targeted area except the Promenade Mall has strip type development with a large amount of space for parking and hence calculated at 75% of the derived devopment rate of 14,062 SF per acre

[f] ((Area Targeted for Development/Redevelopment [28.58 acres] – Promenade Mall Land Area [6.98 acres]) x Existing Development Per Acre in Rest of Commercial District [14,062 SF/acre] + Existing Development on Promenade Mall [285,832 SF]) x 75%

[g] It is assumed that new commercial development in the Commercial District in the targeted area will be at a rate of 50 to 70 percent of the existing development. Hence the low range uses a 50 percent development rate, and the high range uses 70 percent development for new commercial development.

[h] The New Commercial Development Rates (Low & High) were applied to Estimated Existing Non-Residential Square Footage in Acreage Targeted for Development/Redevelopment to derive the square footage of New Commercial Development (Low & High).

[i] The Commercial District Mixed-Use Overlay District has a base density of 30 du/ac, which is used for the low range scenario. This assumes that the developers will not use any city or state density bonus programs.

[j] The high range uses an additional city density bonus of up to 15 units per acre for community benefits totaling 45 du/ac (30 +15). It also assumes the use of a 50 percent state density bonus (45 x 0.5 = 22.5 du/ac) for affordable housing leading to a density of 68 du/ac.

[k] Assumes 40% senior housing at 1.21 persons per du and 60% multi-family units at 2.25 persons per du.

[l] Employment projections were calculated based on assumptions of the specific uses that may be a part of future development. Refer to Error! Not a valid result for table.

Table 5: Commercial District Employment Projections

Area-1 Promenade

Establishment type	Employees per KSF[a]	Existing (SF)				Average Expected Size	Low Range at Buildout (SF)			High Range at Buildout (SF)		
		285,832					114,333			200,083		
		Size	Establishments	Total SF	Employees		Establishments	Total SF	Employees	Establishments	Total SF	Employees
Retail Stores	2.00	5,000	6	22,000	44	2,000	10	20,000	40	18	36,000	72
Health Yoga	1.00	0	0	0	0	1,500	1	1,500	2	1	1,500	2
Fitness	1.00	15,000	1	15,000	15	10,000	1	10,000	10	1	10,000	10
Medical/Offices	3.00	6,000	15	90,000	270	6,000	5	30,000	90	8	48,000	144
Dining	5.00	4,000	7	44,000	220	2,500	8	20,000	100	12	30,000	150
Theatre[b]	0.43	60,000	1	79,000	34	30,000	1	30,000	12	1	30,000	12
Gaming/Ice Chalet	2.00	15,000	1	15,000	30	8,000	0	0	0	1	8,000	16
Speciality Market	2.00	0	0	0	0	8,000	0	0	0	1	8,000	16
Education/Academy	2.00	8,000	7	20,000	40	6,000	1	6,000	12	5	30,000	60
Total[c]				**285,000**	**653**			**117,500**	**266**		**201,500**	**482**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

[b] Based on 0.02 employees per seat.

[c] Numbers may not add up exactly due to rounding.

Area-2 Town & Country + Village

Establishment Type	Employees per KSF[a]	Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		105,639		63,383		84,511	
		Total SF	Employees	Total SF	Employees	Total SF	Employees
Retail Stores	2.0	42,500	85	15,000	30	21,000	42
Medical/Offices	3.0	51,000	153	48,000	144	63,000	189
Other	1.0	12,500	13	0	0	0	0
Total		**106,000**	**251**	**63,000**	**174**	**84,000**	**231**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Area-3 North of Bart Earle way

Establishment Type	Employees per KSF[a]	Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		74,879		44,927		59,903	
		Total SF	Employees	Total SF	Employees	Total SF	Employees
Retail Stores	2.0	38,000	76	20,000	40	30,000	60
Medical/Offices	3.0	36,000	108	25,000	75	30,000	90
Total		**74,000**	**184**	**45,000**	**115**	**60,000**	**150**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Area-4 Brick Walk							
		Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		37,559		22,535		30,047	
Establishment Type	Employees per KSF[a]	Total SF	Employees	Total SF	Employees	Total SF	Employees
Retail Stores	2.0	13,000	26	10,000	20	10,000	20
Medical/Offices	3.0	24,500	74	13,000	39	20,000	60
Total		**37,500**	**100**	**23,000**	**59**	**30,000**	**80**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Area-5 Peninsula Center							
		Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		47,488		28,493		37,990	
Establishment Type	Employees per KSF[a]	Total SF	Employees	Total SF	Employees	Total SF	Employees
Retail Stores	2.0	47,000	94	28,000	56	37,000	74
Medical/Offices	3.0	0	0	0	0	0	0
Total		**47,000**	**94**	**28,000**	**56**	**37,000**	**74**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Commercial District Employment Summary			
	Existing	Low Range	High Range
Total Employment[a]	**1,281**	**670**	**1,017**
Job Loss	**0**	**610**	**263**

[a] Total employees in Area 1 through Area 5. Numbers may not add up exactly due to rounding.

[b] Job Loss = Existing Total Employment – Low Range Total Employment or High Range Total Employment.

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

Table 6 Commercial Office with Mixed-Use Overlay

Total Commercial Office	2.37 acres
Acreage Targeted for Development/Redevelopment	2.37 acres
Existing Non-Residential Square Footage	40,000 SF
Commercial FAR [a]	0.15
New Commercial Development Square Footage	15,486 SF
Residential Density (Low)[b]	22 du/ac
Residential Density (High)[c]	33 du/ac
Residential Units (Low)	52 du
Residential Units (High)	78 du
Population Increase (Low)[d]	96 persons
Population Increase (High)[d]	143 persons
Employment Loss (Low)[e]	-63 employees
Employment Loss (High)[e]	-63 employees

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

SF = square feet
FAR = floor area ratio
du/ac = dwelling unit/acre
du = dwelling unit

[a] Assuming a new development will dedicate 0.15 FAR out of 2.5 FAR towards commercial use in a mixed-use development

[b] The Mixed-Use Overlay District has a base density of 22 dwelling units per acre and is used for the low range scenario. This assumes that the developers will not use any state density bonus programs.

[c] For the high range scenario, it is assumed that the developer will use up to a 50% state density bonus (22 x 0.5 = 11 du/ac) for affordable housing, which would result in a density of 33 du/ac.

[d] Assumes 40% senior housing units at 1.21 persons per du and 60% multi-family units at 2.25 persons per du.

[e] Employment projections were calculated based on assumptions of the specific uses that may be a part of future development. Refer to **Table 7 Commercial Office Employment Projections**

Table 7 Commercial Office Employment Projections

Establishment Type	Employees per KSF[a]	Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		40,000		15,486		15,486	
		Total SF	Employees	Total SF	Employees	Total SF	Employees
Retail Stores	2.0	0	0	4,000	8	4,000	8
Other	1.0	19,000	19	8,000	8	8,000	8
Medical/Offices	3.0	20,000	60	0	0	0	0
Total		**39,000**	**79**	**12,000**	**16**	**12,000**	**16**

KSF = 1,000 square feet SF = square feet

a. City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Commercial Office Employment Summary			
	Existing	Low- Range	High- Range
Total Employment	**79**	**16**	**16**
Job Loss		**63**	**63**

a. Total employees in Area 1 through Area 5. Numbers may not add up exactly due to rounding.

b. Job Loss = Existing Total Employment – Low Range Total Employment or High Range Total Employment.

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

Table 8 Neighborhood Commercial with Mixed Use Overlay

Total Neighborhood Commercial	5.85 acres
Acreage Targeted for Development/Redevelopment	5.85 acres
Targeted Non-Residential Square Footage[a]	16,616 SF
Expected Development Rate[b]	66.7%
Commercial FAR[c]	0.15
New Commercial Development Square Footage[d]	25,495 SF
Residential Density (Low)[e]	22 du/ac
Residential Density (High)[e]	33 du/ac
Residential Units (Low) (DU)	86 du
Residential Units (High) (DU)	129 du
Population Increase (Low)[f]	193 persons
Population Increase (High)[f]	290 persons
Employment Loss (Low)[g]	-17 employees
Employment Loss (High)[g]	-17 employees

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

SF = square feet
FAR = floor area ratio
du/ac = dwelling unit/acre
du = dwelling unit

[a] Targeted Non-Residential Square Footage doesn't include Kelley's Corner (7,240 SF). Hence Targeted Non-Residential Square Footage = Existing SF (23,856 SF) – Kelly's Corner (7,240 SF).

[b] Only two sites of the three are realistically expected to redevelop in the next 20 years; hence the expected development rate of 67% is applied.

[c] Assumes that new development will dedicate 0.15 FAR out of 2.5 FAR towards commercial use in a mixed-use development

[d] (Acreage Targeted for Development/Redevelopment [5.85 acres or 254,826 SF] x Expected Development Rate [67%]) x Commercial FAR [0.15]. Total high and low range square footage for Neighborhood Commercial in **Error! Not a valid result for table.** varies compared to New Commercial Development Square Footage since it is assumed that the Kelly's Corner would not be redeveloped (see Note a). The high and low range square footage is calculated using the following formula:
Existing SF (23,856 SF) - Targeted Non-Residential Square Footage (16,616 SF) + New Commercial Development Square Footage (25,495 SF) = 32,735 SF.

[e] The Mixed-Use Overlay District has a base density of 22 du/ac and is used for the low range scenario. This assumes that the developers will not use any state density bonus programs. For the high range scenario, it is assumed that the developer will use up to a 50% state density bonus (22 X 0.5 = 11 du/ac) for affordable housing, which would result in a density of 33 du/ac.

[f] Assumes multi-family units at 2.25 persons per du.

[g] Employment projections were calculated based on assumptions of the specific uses that may be a part of future development. Refer to **Error! Not a valid result for table.**.

Table 9 Neighborhood Commercial Employment Projections

Establishment Type	Employees per KSF[a]	Existing (SF)		Low Range at Buildout (SF)		High Range at Buildout (SF)	
		16,616		25,495		25,495	
		Total SF	**Employees**	**Total SF**	**Employees**	**Total SF**	**Employees**
Retail Stores	2.0	0	0	1,000	2	1,000	2
Other	1.0	5,000	5	22,000	22	22,000	22
Medical/Offices	3.0	12,000	36	0	0	0	0
Total		**17,000**	**41**	**23,000**	**24**	**23,000**	**24**

KSF = 1,000 square feet SF = square feet

[a] City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1.

Neighborhood Commercial Employment Summary			
	Existing	**Low Range**	**High Range**
Total Employment[a]	**41**	**24**	**24**
Job Loss[b]		**17**	**17**

[a.] Total employees in Area 1 through Area 5. Numbers may not add up exactly due to rounding.

[b.] Job Loss = Existing Total Employment – Low Range Total Employment or High Range Total Employment

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

Table 10 Institutional Use

Institutional Acreage Targeted for Development/Redevelopment[a]	96 acres
Residential Density (Low)[b]	1 du/ac
Residential Density (High)[b]	2 du/ac
Residential Units (Low)	96 du
Residential Units (High)	192 du
Population Increase (Low)[c]	216 persons
Population Increase (High)[c]	432 persons

Source: LA County GIS; LA County Accessor's Website; Rolling Hills Estates GIS; City of Los Angeles VMT Calculator Documentation Version 1.3. Table 1

du/ac = dwelling unit/acre
du = dwelling unit

[a] Three sites are realistically expected to incorporate residential uses on institutional properties based on the availability of space in the next 20 years.
[b] Based on the surrounding single-family density of 1 to 2 du/ac, the low and high range densities for workforce housing on institutional properties is 1 and 2 du/ac, respectively.
[c] Assumes multi-family units at 2.25 persons per du.

APPENDIX C

Air Quality/Greenhouse Gas Emissions/Energy Data

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Existing Condition

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	426.52	1000sqft	57.70	426,524.00	0
General Office Building	504.53	1000sqft	10.50	504,531.00	0
Government Office Building	96.03	1000sqft	7.80	96,034.00	0
Hospital	23.93	1000sqft	1.20	23,932.00	0
Office Park	326.05	1000sqft	18.90	326,053.00	0
Elementary School	4,674.00	1000sqft	107.30	4,674,000.00	0
Place of Worship	12.72	1000sqft	22.80	12,718.00	0
Arena	3.80	Acre	3.80	165,528.00	0
City Park	147.00	Acre	147.00	6,403,320.00	0
Golf Course	118.10	Acre	118.10	5,144,436.00	0
Apartments Mid Rise	232.00	Dwelling Unit	9.20	232,000.00	664
Condo/Townhouse	679.00	Dwelling Unit	97.10	679,000.00	1942
Condo/Townhouse	3.00	Dwelling Unit	0.00	3,000.00	9
Single Family Housing	2,423.00	Dwelling Unit	1,057.70	4,361,400.00	6930

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per RHE Sustainability Element Page 2-47

Land Use - per Land Use spreadsheet

Construction Phase - no construction phase

Off-road Equipment - no construction phase

Grading - no construction phase

Vehicle Trips - VMT=192,702,597

Area Coating - rule 1113

Water And Wastewater -

Solid Waste -

Area Mitigation - rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LandUseSquareFeet	426,520.00	426,524.00
tblLandUse	LandUseSquareFeet	504,530.00	504,531.00
tblLandUse	LandUseSquareFeet	96,030.00	96,034.00
tblLandUse	LandUseSquareFeet	23,930.00	23,932.00
tblLandUse	LandUseSquareFeet	326,050.00	326,053.00
tblLandUse	LandUseSquareFeet	12,720.00	12,718.00
tblLandUse	LotAcreage	9.79	57.70
tblLandUse	LotAcreage	11.58	10.50
tblLandUse	LotAcreage	2.20	7.80
tblLandUse	LotAcreage	0.55	1.20
tblLandUse	LotAcreage	7.49	18.90
tblLandUse	LotAcreage	0.29	22.80

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	6.11	9.20
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	42.44	97.10
tblLandUse	LotAcreage	786.69	1,057.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	4.91	2.62
tblVehicleTrips	ST_TR	1.96	1.05
tblVehicleTrips	ST_TR	8.14	4.35
tblVehicleTrips	ST_TR	2.21	1.18
tblVehicleTrips	ST_TR	3.74	2.00
tblVehicleTrips	ST_TR	7.72	4.12
tblVehicleTrips	ST_TR	1.64	0.88
tblVehicleTrips	ST_TR	5.99	3.20
tblVehicleTrips	ST_TR	9.54	5.11
tblVehicleTrips	SU_TR	4.09	2.19
tblVehicleTrips	SU_TR	2.19	1.17
tblVehicleTrips	SU_TR	6.28	3.36
tblVehicleTrips	SU_TR	0.70	0.37
tblVehicleTrips	SU_TR	3.74	2.00
tblVehicleTrips	SU_TR	6.77	3.62
tblVehicleTrips	SU_TR	0.76	0.41
tblVehicleTrips	SU_TR	27.63	14.76
tblVehicleTrips	SU_TR	8.55	4.57

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	2.91
tblVehicleTrips	WD_TR	33.33	17.81
tblVehicleTrips	WD_TR	0.78	0.42
tblVehicleTrips	WD_TR	7.32	3.91
tblVehicleTrips	WD_TR	19.52	10.43
tblVehicleTrips	WD_TR	9.74	5.20
tblVehicleTrips	WD_TR	3.74	2.00
tblVehicleTrips	WD_TR	22.59	12.07
tblVehicleTrips	WD_TR	10.72	5.73
tblVehicleTrips	WD_TR	11.07	5.91
tblVehicleTrips	WD_TR	6.95	3.72
tblVehicleTrips	WD_TR	9.44	5.04

2.0 Emissions Summary

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	58.9916	1.4412	60.1176	0.0670		4.0280	4.0280		4.0280	4.0280	426.8944	876.7152	1,303.6097	1.3280	0.0290	1,345.4435
Energy	0.7803	6.8830	4.4115	0.0426		0.5392	0.5392		0.5392	0.5392	0.0000	16,789.4509	16,789.4509	0.1480	0.1416	16,835.3432
Mobile	34.0188	47.4173	366.2359	0.7487	72.3982	0.7597	73.1579	19.3147	0.7105	20.0251	0.0000	69,351.6516	69,351.6516	4.8591	3.1534	70,412.8281
Waste						0.0000	0.0000		0.0000	0.0000	2,243.0704	0.0000	2,243.0704	132.5617	0.0000	5,557.1121
Water						0.0000	0.0000		0.0000	0.0000	191.6128	2,349.9116	2,541.5244	19.6805	0.4647	3,172.0164
Total	**93.7907**	**55.7415**	**430.7650**	**0.8582**	**72.3982**	**5.3268**	**77.7250**	**19.3147**	**5.2776**	**24.5922**	**2,861.5777**	**89,367.7293**	**92,229.3070**	**158.5772**	**3.7886**	**97,322.7432**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	58.9916	1.4412	60.1176	0.0670		4.0280	4.0280		4.0280	4.0280	426.8944	876.7152	1,303.6097	1.3280	0.0290	1,345.4435
Energy	0.7803	6.8830	4.4115	0.0426		0.5392	0.5392		0.5392	0.5392	0.0000	16,789.4509	16,789.4509	0.1480	0.1416	16,835.3432
Mobile	34.0188	47.4173	366.2359	0.7487	72.3982	0.7597	73.1579	19.3147	0.7105	20.0251	0.0000	69,351.6516	69,351.6516	4.8591	3.1534	70,412.8281
Waste						0.0000	0.0000		0.0000	0.0000	2,243.0704	0.0000	2,243.0704	132.5617	0.0000	5,557.1121
Water						0.0000	0.0000		0.0000	0.0000	191.6128	2,349.9116	2,541.5244	19.6805	0.4647	3,172.0164
Total	**93.7907**	**55.7415**	**430.7650**	**0.8582**	**72.3982**	**5.3268**	**77.7250**	**19.3147**	**5.2776**	**24.5922**	**2,861.5777**	**89,367.7293**	**92,229.3070**	**158.5772**	**3.7886**	**97,322.7432**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	34.0188	47.4173	366.2359	0.7487	72.3982	0.7597	73.1579	19.3147	0.7105	20.0251	0.0000	69,351.6516	69,351.6516	4.8591	3.1534	70,412.8281
Unmitigated	34.0188	47.4173	366.2359	0.7487	72.3982	0.7597	73.1579	19.3147	0.7105	20.0251	0.0000	69,351.6516	69,351.6516	4.8591	3.1534	70,412.8281

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	675.12	607.84	508.08	2,192,601	2,192,601
Arena	67.68	0.00	0.00	104,345	104,345
City Park	61.74	154.35	171.99	261,050	261,050
Condo/Townhouse	2,654.89	2,953.65	2281.44	9,035,701	9,035,701
Condo/Townhouse	11.73	13.05	10.08	39,922	39,922
Elementary School	48,749.82	0.00	0.00	120,007,566	120,007,566
General Office Building	2,217.90	503.29	157.81	5,407,740	5,407,740
General Office Building	2,623.56	595.35	186.68	6,396,810	6,396,810
Golf Course	236.20	236.20	236.20	575,268	575,268
Government Office Building	1,159.08	0.00	0.00	1,949,547	1,949,547
Hospital	137.12	98.59	86.63	482,286	482,286
Office Park	1,926.96	286.92	133.68	4,853,375	4,853,375
Place of Worship	47.32	40.70	187.75	141,691	141,691

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	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	12,211.92	12,381.53	11073.11	41,256,857	41,256,857
Total	72,781.03	17,871.48	15,033.44	192,704,760	192,704,760

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Golf Course	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Arena	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
City Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Condo/Townhouse	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Elementary School	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
General Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Golf Course	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

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Government Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Hospital	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Office Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Place of Worship	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Single Family Housing	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,066.7274	9,066.7274	0.0000	0.0000	9,066.7274
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,066.7274	9,066.7274	0.0000	0.0000	9,066.7274
NaturalGas Mitigated	0.7803	6.8830	4.4115	0.0426		0.5392	0.5392		0.5392	0.5392	0.0000	7,722.7235	7,722.7235	0.1480	0.1416	7,768.6158
NaturalGas Unmitigated	0.7803	6.8830	4.4115	0.0426		0.5392	0.5392		0.5392	0.5392	0.0000	7,722.7235	7,722.7235	0.1480	0.1416	7,768.6158

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.58671e+006	0.0140	0.1192	0.0507	7.6000e-004		9.6400e-003	9.6400e-003		9.6400e-003	9.6400e-003	0.0000	138.0368	138.0368	2.6500e-003	2.5300e-003	138.8571
Arena	3.43636e+006	0.0185	0.1685	0.1415	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	183.3773	183.3773	3.5100e-003	3.3600e-003	184.4670
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.12072e+007	0.0604	0.5164	0.2198	3.3000e-003		0.0418	0.0418		0.0418	0.0418	0.0000	598.0585	598.0585	0.0115	0.0110	601.6125
Condo/Townhouse	49516.3	2.7000e-004	2.2800e-003	9.7000e-004	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6424	2.6424	5.0000e-005	5.0000e-005	2.6581
Elementary School	5.48728e+007	0.2959	2.6898	2.2595	0.0161		0.2044	0.2044		0.2044	0.2044	0.0000	2,928.2194	2,928.2194	0.0561	0.0537	2,945.6204
General Office Building	3.86004e+006	0.0208	0.1892	0.1589	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	205.9866	205.9866	3.9500e-003	3.7800e-003	207.2106
General Office Building	4.56601e+006	0.0246	0.2238	0.1880	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	243.6594	243.6594	4.6700e-003	4.4700e-003	245.1074
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	869108	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.3789	46.3789	8.9000e-004	8.5000e-004	46.6545
Hospital	1.42778e+006	7.7000e-003	0.0700	0.0588	4.2000e-004		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	76.1919	76.1919	1.4600e-003	1.4000e-003	76.6447
Office Park	3.67462e+006	0.0198	0.1801	0.1513	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.0916	196.0916	3.7600e-003	3.6000e-003	197.2569
Place of Worship	264026	1.4200e-003	0.0129	0.0109	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0894	14.0894	2.7000e-004	2.6000e-004	14.1731
Single Family Housing	5.79042e+007	0.3122	2.6681	1.1354	0.0170		0.2157	0.2157		0.2157	0.2157	0.0000	3,089.9912	3,089.9912	0.0592	0.0567	3,108.3535
Total		**0.7803**	**6.8830**	**4.4115**	**0.0426**		**0.5391**	**0.5391**		**0.5391**	**0.5391**	**0.0000**	**7,722.7235**	**7,722.7235**	**0.1480**	**0.1416**	**7,768.6158**

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.58671e+006	0.0140	0.1192	0.0507	7.6000e-004		9.6400e-003	9.6400e-003		9.6400e-003	9.6400e-003	0.0000	138.0368	138.0368	2.6500e-003	2.5300e-003	138.8571
Arena	3.43636e+006	0.0185	0.1685	0.1415	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	183.3773	183.3773	3.5100e-003	3.3600e-003	184.4670
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.12072e+007	0.0604	0.5164	0.2198	3.3000e-003		0.0418	0.0418		0.0418	0.0418	0.0000	598.0585	598.0585	0.0115	0.0110	601.6125
Condo/Townhouse	49516.3	2.7000e-004	2.2800e-003	9.7000e-004	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6424	2.6424	5.0000e-005	5.0000e-005	2.6581
Elementary School	5.48728e+007	0.2959	2.6898	2.2595	0.0161		0.2044	0.2044		0.2044	0.2044	0.0000	2,928.2194	2,928.2194	0.0561	0.0537	2,945.6204
General Office Building	3.86004e+006	0.0208	0.1892	0.1589	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	205.9866	205.9866	3.9500e-003	3.7800e-003	207.2106
General Office Building	4.56601e+006	0.0246	0.2238	0.1880	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	243.6594	243.6594	4.6700e-003	4.4700e-003	245.1074
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	869108	4.6900e-003	0.0426	0.0358	2.6000e-004		3.2400e-003	3.2400e-003		3.2400e-003	3.2400e-003	0.0000	46.3789	46.3789	8.9000e-004	8.5000e-004	46.6545
Hospital	1.42778e+006	7.7000e-003	0.0700	0.0588	4.2000e-004		5.3200e-003	5.3200e-003		5.3200e-003	5.3200e-003	0.0000	76.1919	76.1919	1.4600e-003	1.4000e-003	76.6447
Office Park	3.67462e+006	0.0198	0.1801	0.1513	1.0800e-003		0.0137	0.0137		0.0137	0.0137	0.0000	196.0916	196.0916	3.7600e-003	3.6000e-003	197.2569
Place of Worship	264026	1.4200e-003	0.0129	0.0109	8.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	14.0894	14.0894	2.7000e-004	2.6000e-004	14.1731
Single Family Housing	5.79042e+007	0.3122	2.6681	1.1354	0.0170		0.2157	0.2157		0.2157	0.2157	0.0000	3,089.9912	3,089.9912	0.0592	0.0567	3,108.3535
Total		**0.7803**	**6.8830**	**4.4115**	**0.0426**		**0.5391**	**0.5391**		**0.5391**	**0.5391**	**0.0000**	**7,722.7235**	**7,722.7235**	**0.1480**	**0.1416**	**7,768.6158**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	889449	113.3686	0.0000	0.0000	113.3686
Arena	1.36892e+006	174.4814	0.0000	0.0000	174.4814
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	14497	1.8478	0.0000	0.0000	1.8478
Condo/Townhouse	3.28115e+006	418.2130	0.0000	0.0000	418.2130
Elementary School	2.74831e+007	3,502.9835	0.0000	0.0000	3,502.9835
General Office Building	5.75381e+006	733.3773	0.0000	0.0000	733.3773
General Office Building	6.80612e+006	867.5048	0.0000	0.0000	867.5048
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Government Office Building	1.2955e+006	165.1236	0.0000	0.0000	165.1236
Hospital	361134	46.0299	0.0000	0.0000	46.0299
Office Park	4.83211e+006	615.8975	0.0000	0.0000	615.8975
Place of Worship	105178	13.4059	0.0000	0.0000	13.4059
Single Family Housing	1.89432e+007	2,414.4941	0.0000	0.0000	2,414.4941
Total		**9,066.7273**	**0.0000**	**0.0000**	**9,066.7273**

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RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	889449	113.3686	0.0000	0.0000	113.3686
Arena	1.36892e+006	174.4814	0.0000	0.0000	174.4814
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	14497	1.8478	0.0000	0.0000	1.8478
Condo/Townhouse	3.28115e+006	418.2130	0.0000	0.0000	418.2130
Elementary School	2.74831e+007	3,502.9835	0.0000	0.0000	3,502.9835
General Office Building	5.75381e+006	733.3773	0.0000	0.0000	733.3773
General Office Building	6.80612e+006	867.5048	0.0000	0.0000	867.5048
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Government Office Building	1.2955e+006	165.1236	0.0000	0.0000	165.1236
Hospital	361134	46.0299	0.0000	0.0000	46.0299
Office Park	4.83211e+006	615.8975	0.0000	0.0000	615.8975
Place of Worship	105178	13.4059	0.0000	0.0000	13.4059
Single Family Housing	1.89432e+007	2,414.4941	0.0000	0.0000	2,414.4941
Total		**9,066.7273**	**0.0000**	**0.0000**	**9,066.7273**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	58.9916	1.4412	60.1176	0.0670		4.0280	4.0280		4.0280	4.0280	426.8944	876.7152	1,303.6097	1.3280	0.0290	1,345.4435
Unmitigated	58.9916	1.4412	60.1176	0.0670		4.0280	4.0280		4.0280	4.0280	426.8944	876.7152	1,303.6097	1.3280	0.0290	1,345.4435

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.0941					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	41.6809					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	13.1640	1.0423	25.5484	0.0652		3.8376	3.8376		3.8376	3.8376	426.8944	820.3445	1,247.2389	1.2731	0.0290	1,287.7004
Landscaping	1.0525	0.3989	34.5693	1.8200e-003		0.1904	0.1904		0.1904	0.1904	0.0000	56.3708	56.3708	0.0549	0.0000	57.7431
Total	**58.9916**	**1.4412**	**60.1176**	**0.0670**		**4.0280**	**4.0280**		**4.0280**	**4.0280**	**426.8944**	**876.7152**	**1,303.6097**	**1.3280**	**0.0290**	**1,345.4435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.0941					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	41.6809					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	13.1640	1.0423	25.5484	0.0652		3.8376	3.8376		3.8376	3.8376	426.8944	820.3445	1,247.2389	1.2731	0.0290	1,287.7004
Landscaping	1.0525	0.3989	34.5693	1.8200e-003		0.1904	0.1904		0.1904	0.1904	0.0000	56.3708	56.3708	0.0549	0.0000	57.7431
Total	**58.9916**	**1.4412**	**60.1176**	**0.0670**		**4.0280**	**4.0280**		**4.0280**	**4.0280**	**426.8944**	**876.7152**	**1,303.6097**	**1.3280**	**0.0290**	**1,345.4435**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,541.5244	19.6805	0.4647	3,172.0164
Unmitigated	2,541.5244	19.6805	0.4647	3,172.0164

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.1157 / 9.52948	43.3768	0.4926	0.0116	59.1562
Arena	5.1154 / 0.326515	10.5750	0.1667	3.9400e-003	15.9150
City Park	0 / 175.148	248.0223	0.0000	0.0000	248.0223
Condo/Townhouse	44.435 / 28.0134	127.5129	1.4479	0.0342	173.8989
Elementary School	135.532 / 348.51	761.4487	4.4163	0.1043	902.9312
General Office Building	165.479 / 101.423	470.7580	5.3921	0.1273	643.5028
Golf Course	0 / 140.714	199.2614	0.0000	0.0000	199.2614
Government Office Building	19.0773 / 11.6925	54.2715	0.6216	0.0147	74.1864
Hospital	3.00275 / 0.571952	6.7461	0.0978	2.3100e-003	9.8807
Office Park	57.9501 / 35.5178	164.8576	1.8883	0.0446	225.3521
Place of Worship	0.397995 / 0.622505	1.6683	0.0130	3.1000e-004	2.0838
Single Family Housing	157.868 / 99.5256	453.0259	5.1441	0.1215	617.8257
Total		**2,541.5244**	**19.6805**	**0.4647**	**3,172.0164**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.1157 / 9.52948	43.3768	0.4926	0.0116	59.1562
Arena	5.1154 / 0.326515	10.5750	0.1667	3.9400e-003	15.9150
City Park	0 / 175.148	248.0223	0.0000	0.0000	248.0223
Condo/Townhouse	44.435 / 28.0134	127.5129	1.4479	0.0342	173.8989
Elementary School	135.532 / 348.51	761.4487	4.4163	0.1043	902.9312
General Office Building	165.479 / 101.423	470.7580	5.3921	0.1273	643.5028
Golf Course	0 / 140.714	199.2614	0.0000	0.0000	199.2614
Government Office Building	19.0773 / 11.6925	54.2715	0.6216	0.0147	74.1864
Hospital	3.00275 / 0.571952	6.7461	0.0978	2.3100e-003	9.8807
Office Park	57.9501 / 35.5178	164.8576	1.8883	0.0446	225.3521
Place of Worship	0.397995 / 0.622505	1.6683	0.0130	3.1000e-004	2.0838
Single Family Housing	157.868 / 99.5256	453.0259	5.1441	0.1215	617.8257
Total		**2,541.5244**	**19.6805**	**0.4647**	**3,172.0164**

8.0 Waste Detail

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2,243.0704	132.5617	0.0000	5,557.1121
Unmitigated	2,243.0704	132.5617	0.0000	5,557.1121

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	106.72	21.6632	1.2803	0.0000	53.6697
Arena	0.33	0.0670	3.9600e-003	0.0000	0.1660
City Park	12.64	2.5658	0.1516	0.0000	6.3567
Condo/Townhouse	313.72	63.6823	3.7635	0.0000	157.7703
Elementary School	6076.2	1,233.4137	72.8927	0.0000	3,055.7302
General Office Building	865.88	175.7658	10.3875	0.0000	435.4524
Golf Course	109.83	22.2945	1.3176	0.0000	55.2337
Government Office Building	89.31	18.1291	1.0714	0.0000	44.9141
Hospital	258.44	52.4610	3.1004	0.0000	129.9699
Office Park	303.23	61.5530	3.6377	0.0000	152.4948
Place of Worship	72.5	14.7168	0.8697	0.0000	36.4604
Single Family Housing	2841.3	576.7582	34.0854	0.0000	1,428.8941
Total		**2,243.0704**	**132.5617**	**0.0000**	**5,557.1121**

RHE GPU Existing Condition - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	106.72	21.6632	1.2803	0.0000	53.6697
Arena	0.33	0.0670	3.9600e-003	0.0000	0.1660
City Park	12.64	2.5658	0.1516	0.0000	6.3567
Condo/Townhouse	313.72	63.6823	3.7635	0.0000	157.7703
Elementary School	6076.2	1,233.4137	72.8927	0.0000	3,055.7302
General Office Building	865.88	175.7658	10.3875	0.0000	435.4524
Golf Course	109.83	22.2945	1.3176	0.0000	55.2337
Government Office Building	89.31	18.1291	1.0714	0.0000	44.9141
Hospital	258.44	52.4610	3.1004	0.0000	129.9699
Office Park	303.23	61.5530	3.6377	0.0000	152.4948
Place of Worship	72.5	14.7168	0.8697	0.0000	36.4604
Single Family Housing	2841.3	576.7582	34.0854	0.0000	1,428.8941
Total		**2,243.0704**	**132.5617**	**0.0000**	**5,557.1121**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Existing Condition

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	426.52	1000sqft	57.70	426,524.00	0
General Office Building	504.53	1000sqft	10.50	504,531.00	0
Government Office Building	96.03	1000sqft	7.80	96,034.00	0
Hospital	23.93	1000sqft	1.20	23,932.00	0
Office Park	326.05	1000sqft	18.90	326,053.00	0
Elementary School	4,674.00	1000sqft	107.30	4,674,000.00	0
Place of Worship	12.72	1000sqft	22.80	12,718.00	0
Arena	3.80	Acre	3.80	165,528.00	0
City Park	147.00	Acre	147.00	6,403,320.00	0
Golf Course	118.10	Acre	118.10	5,144,436.00	0
Apartments Mid Rise	232.00	Dwelling Unit	9.20	232,000.00	664
Condo/Townhouse	679.00	Dwelling Unit	97.10	679,000.00	1942
Condo/Townhouse	3.00	Dwelling Unit	0.00	3,000.00	9
Single Family Housing	2,423.00	Dwelling Unit	1,057.70	4,361,400.00	6930

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per RHE Sustainability Element Page 2-47

Land Use - per Land Use spreadsheet

Construction Phase - no construction phase

Off-road Equipment - no construction phase

Grading - no construction phase

Vehicle Trips - VMT=192,702,597

Area Coating - rule 1113

Water And Wastewater -

Solid Waste -

Area Mitigation - rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LandUseSquareFeet	426,520.00	426,524.00
tblLandUse	LandUseSquareFeet	504,530.00	504,531.00
tblLandUse	LandUseSquareFeet	96,030.00	96,034.00
tblLandUse	LandUseSquareFeet	23,930.00	23,932.00
tblLandUse	LandUseSquareFeet	326,050.00	326,053.00
tblLandUse	LandUseSquareFeet	12,720.00	12,718.00
tblLandUse	LotAcreage	9.79	57.70
tblLandUse	LotAcreage	11.58	10.50
tblLandUse	LotAcreage	2.20	7.80
tblLandUse	LotAcreage	0.55	1.20
tblLandUse	LotAcreage	7.49	18.90
tblLandUse	LotAcreage	0.29	22.80

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	6.11	9.20
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	42.44	97.10
tblLandUse	LotAcreage	786.69	1,057.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	4.91	2.62
tblVehicleTrips	ST_TR	1.96	1.05
tblVehicleTrips	ST_TR	8.14	4.35
tblVehicleTrips	ST_TR	2.21	1.18
tblVehicleTrips	ST_TR	3.74	2.00
tblVehicleTrips	ST_TR	7.72	4.12
tblVehicleTrips	ST_TR	1.64	0.88
tblVehicleTrips	ST_TR	5.99	3.20
tblVehicleTrips	ST_TR	9.54	5.11
tblVehicleTrips	SU_TR	4.09	2.19
tblVehicleTrips	SU_TR	2.19	1.17
tblVehicleTrips	SU_TR	6.28	3.36
tblVehicleTrips	SU_TR	0.70	0.37
tblVehicleTrips	SU_TR	3.74	2.00
tblVehicleTrips	SU_TR	6.77	3.62
tblVehicleTrips	SU_TR	0.76	0.41
tblVehicleTrips	SU_TR	27.63	14.76
tblVehicleTrips	SU_TR	8.55	4.57

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	2.91
tblVehicleTrips	WD_TR	33.33	17.81
tblVehicleTrips	WD_TR	0.78	0.42
tblVehicleTrips	WD_TR	7.32	3.91
tblVehicleTrips	WD_TR	19.52	10.43
tblVehicleTrips	WD_TR	9.74	5.20
tblVehicleTrips	WD_TR	3.74	2.00
tblVehicleTrips	WD_TR	22.59	12.07
tblVehicleTrips	WD_TR	10.72	5.73
tblVehicleTrips	WD_TR	11.07	5.91
tblVehicleTrips	WD_TR	6.95	3.72
tblVehicleTrips	WD_TR	9.44	5.04

2.0 Emissions Summary

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Energy	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
Mobile	250.6600	308.8666	2,658.5165	5.5137	525.7996	5.4147	531.2143	140.0559	5.0640	145.1199		562,824.1873	562,824.1873	37.2770	23.4923	570,756.8020
Total	**1,561.8212**	**433.1600**	**5,003.1129**	**10.9756**	**525.7996**	**316.8968**	**842.6964**	**140.0559**	**316.5460**	**456.6020**	**37,645.6451**	**682,309.0210**	**719,954.6660**	**150.9217**	**26.9025**	**731,744.6648**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Energy	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
Mobile	250.6600	308.8666	2,658.5165	5.5137	525.7996	5.4147	531.2143	140.0559	5.0640	145.1199		562,824.1873	562,824.1873	37.2770	23.4923	570,756.8020
Total	**1,561.8212**	**433.1600**	**5,003.1129**	**10.9756**	**525.7996**	**316.8968**	**842.6964**	**140.0559**	**316.5460**	**456.6020**	**37,645.6451**	**682,309.0210**	**719,954.6660**	**150.9217**	**26.9025**	**731,744.6648**

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	250.6600	308.8666	2,658.5165	5.5137	525.7996	5.4147	531.2143	140.0559	5.0640	145.1199		562,824.1873	562,824.1873	37.2770	23.4923	570,756.8020
Unmitigated	250.6600	308.8666	2,658.5165	5.5137	525.7996	5.4147	531.2143	140.0559	5.0640	145.1199		562,824.1873	562,824.1873	37.2770	23.4923	570,756.8020

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	675.12	607.84	508.08	2,192,601	2,192,601
Arena	67.68	0.00	0.00	104,345	104,345
City Park	61.74	154.35	171.99	261,050	261,050
Condo/Townhouse	2,654.89	2,953.65	2281.44	9,035,701	9,035,701
Condo/Townhouse	11.73	13.05	10.08	39,922	39,922
Elementary School	48,749.82	0.00	0.00	120,007,566	120,007,566
General Office Building	2,217.90	503.29	157.81	5,407,740	5,407,740
General Office Building	2,623.56	595.35	186.68	6,396,810	6,396,810
Golf Course	236.20	236.20	236.20	575,268	575,268
Government Office Building	1,159.08	0.00	0.00	1,949,547	1,949,547
Hospital	137.12	98.59	86.63	482,286	482,286
Office Park	1,926.96	286.92	133.68	4,853,375	4,853,375
Place of Worship	47.32	40.70	187.75	141,691	141,691

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	12,211.92	12,381.53	11073.11	41,256,857	41,256,857
Total	72,781.03	17,871.48	15,033.44	192,704,760	192,704,760

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Golf Course	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Arena	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
City Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Condo/Townhouse	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Elementary School	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
General Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Golf Course	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Government Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Hospital	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Office Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Place of Worship	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Single Family Housing	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
NaturalGas Unmitigated	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	7086.88	0.0764	0.6531	0.2779	4.1700e-003		0.0528	0.0528		0.0528	0.0528		833.7508	833.7508	0.0160	0.0153	838.7054
Arena	9414.69	0.1015	0.9230	0.7753	5.5400e-003		0.0702	0.0702		0.0702	0.0702		1,107.6104	1,107.6104	0.0212	0.0203	1,114.1924
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	135.661	1.4600e-003	0.0125	5.3200e-003	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003		15.9601	15.9601	3.1000e-004	2.9000e-004	16.0550
Condo/Townhouse	30704.6	0.3311	2.8296	1.2041	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.3106	3,612.3106	0.0692	0.0662	3,633.7768
Elementary School	150336	1.6213	14.7389	12.3806	0.0884		1.1202	1.1202		1.1202	1.1202		17,686.6269	17,686.6269	0.3390	0.3243	17,791.7297
General Office Building	10575.5	0.1141	1.0368	0.8709	6.2200e-003		0.0788	0.0788		0.0788	0.0788		1,244.1715	1,244.1715	0.0239	0.0228	1,251.5650
General Office Building	12509.6	0.1349	1.2264	1.0302	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.7182	1,471.7182	0.0282	0.0270	1,480.4638
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	2381.12	0.0257	0.2334	0.1961	1.4000e-003		0.0177	0.0177		0.0177	0.0177		280.1314	280.1314	5.3700e-003	5.1400e-003	281.7961
Hospital	3911.73	0.0422	0.3835	0.3221	2.3000e-003		0.0292	0.0292		0.0292	0.0292		460.2041	460.2041	8.8200e-003	8.4400e-003	462.9388
Office Park	10067.4	0.1086	0.9870	0.8291	5.9200e-003		0.0750	0.0750		0.0750	0.0750		1,184.4053	1,184.4053	0.0227	0.0217	1,191.4436
Place of Worship	723.358	7.8000e-003	0.0709	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003		85.1009	85.1009	1.6300e-003	1.5600e-003	85.6067
Single Family Housing	158642	1.7108	14.6199	6.2213	0.0933		1.1820	1.1820		1.1820	1.1820		18,663.7384	18,663.7384	0.3577	0.3422	18,774.6476
Total		**4.2759**	**37.7151**	**24.1726**	**0.2332**		**2.9542**	**2.9542**		**2.9542**	**2.9542**		**46,645.7286**	**46,645.7286**	**0.8941**	**0.8552**	**46,922.9209**

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.08688	0.0764	0.6531	0.2779	4.1700e-003		0.0528	0.0528		0.0528	0.0528		833.7508	833.7508	0.0160	0.0153	838.7054
Arena	9.41469	0.1015	0.9230	0.7753	5.5400e-003		0.0702	0.0702		0.0702	0.0702		1,107.6104	1,107.6104	0.0212	0.0203	1,114.1924
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0.135661	1.4600e-003	0.0125	5.3200e-003	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003		15.9601	15.9601	3.1000e-004	2.9000e-004	16.0550
Condo/Townhouse	30.7046	0.3311	2.8296	1.2041	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.3106	3,612.3106	0.0692	0.0662	3,633.7768
Elementary School	150.336	1.6213	14.7389	12.3806	0.0884		1.1202	1.1202		1.1202	1.1202		17,686.6269	17,686.6269	0.3390	0.3243	17,791.7297
General Office Building	10.5755	0.1141	1.0368	0.8709	6.2200e-003		0.0788	0.0788		0.0788	0.0788		1,244.1715	1,244.1715	0.0239	0.0228	1,251.5650
General Office Building	12.5096	0.1349	1.2264	1.0302	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.7182	1,471.7182	0.0282	0.0270	1,480.4638
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	2.38112	0.0257	0.2334	0.1961	1.4000e-003		0.0177	0.0177		0.0177	0.0177		280.1314	280.1314	5.3700e-003	5.1400e-003	281.7961
Hospital	3.91173	0.0422	0.3835	0.3221	2.3000e-003		0.0292	0.0292		0.0292	0.0292		460.2041	460.2041	8.8200e-003	8.4400e-003	462.9388
Office Park	10.0674	0.1086	0.9870	0.8291	5.9200e-003		0.0750	0.0750		0.0750	0.0750		1,184.4053	1,184.4053	0.0227	0.0217	1,191.4436
Place of Worship	0.723358	7.8000e-003	0.0709	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003		85.1009	85.1009	1.6300e-003	1.5600e-003	85.6067
Single Family Housing	158.642	1.7108	14.6199	6.2213	0.0933		1.1820	1.1820		1.1820	1.1820		18,663.7384	18,663.7384	0.3577	0.3422	18,774.6476
Total		**4.2759**	**37.7151**	**24.1726**	**0.2332**		**2.9542**	**2.9542**		**2.9542**	**2.9542**		**46,645.7286**	**46,645.7286**	**0.8941**	**0.8552**	**46,922.9209**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Mitigated	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Unmitigated	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.9541					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.3884					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,053.1227	83.3875	2,043.8698	5.2141		307.0047	307.0047		307.0047	307.0047	37,645.6451	72,342.0000	109,987.6451	112.2666	2.5551	113,555.7353
Landscaping	8.4202	3.1908	276.5540	0.0146		1.5232	1.5232		1.5232	1.5232		497.1050	497.1050	0.4841		509.2067
Total	**1,306.8853**	**86.5783**	**2,320.4239**	**5.2287**		**308.5278**	**308.5278**		**308.5278**	**308.5278**	**37,645.6451**	**72,839.1050**	**110,484.7501**	**112.7507**	**2.5551**	**114,064.9420**

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.9541					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.3884					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,053.1227	83.3875	2,043.8698	5.2141		307.0047	307.0047		307.0047	307.0047	37,645.6451	72,342.0000	109,987.6451	112.2666	2.5551	113,555.7353
Landscaping	8.4202	3.1908	276.5540	0.0146		1.5232	1.5232		1.5232	1.5232		497.1050	497.1050	0.4841		509.2067
Total	**1,306.8853**	**86.5783**	**2,320.4239**	**5.2287**		**308.5278**	**308.5278**		**308.5278**	**308.5278**	**37,645.6451**	**72,839.1050**	**110,484.7501**	**112.7507**	**2.5551**	**114,064.9420**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU Existing Condition - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Existing Condition

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	426.52	1000sqft	57.70	426,524.00	0
General Office Building	504.53	1000sqft	10.50	504,531.00	0
Government Office Building	96.03	1000sqft	7.80	96,034.00	0
Hospital	23.93	1000sqft	1.20	23,932.00	0
Office Park	326.05	1000sqft	18.90	326,053.00	0
Elementary School	4,674.00	1000sqft	107.30	4,674,000.00	0
Place of Worship	12.72	1000sqft	22.80	12,718.00	0
Arena	3.80	Acre	3.80	165,528.00	0
City Park	147.00	Acre	147.00	6,403,320.00	0
Golf Course	118.10	Acre	118.10	5,144,436.00	0
Apartments Mid Rise	232.00	Dwelling Unit	9.20	232,000.00	664
Condo/Townhouse	679.00	Dwelling Unit	97.10	679,000.00	1942
Condo/Townhouse	3.00	Dwelling Unit	0.00	3,000.00	9
Single Family Housing	2,423.00	Dwelling Unit	1,057.70	4,361,400.00	6930

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per RHE Sustainability Element Page 2-47

Land Use - per Land Use spreadsheet

Construction Phase - no construction phase

Off-road Equipment - no construction phase

Grading - no construction phase

Vehicle Trips - VMT=192,702,597

Area Coating - rule 1113

Water And Wastewater -

Solid Waste -

Area Mitigation - rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LandUseSquareFeet	426,520.00	426,524.00
tblLandUse	LandUseSquareFeet	504,530.00	504,531.00
tblLandUse	LandUseSquareFeet	96,030.00	96,034.00
tblLandUse	LandUseSquareFeet	23,930.00	23,932.00
tblLandUse	LandUseSquareFeet	326,050.00	326,053.00
tblLandUse	LandUseSquareFeet	12,720.00	12,718.00
tblLandUse	LotAcreage	9.79	57.70
tblLandUse	LotAcreage	11.58	10.50
tblLandUse	LotAcreage	2.20	7.80
tblLandUse	LotAcreage	0.55	1.20
tblLandUse	LotAcreage	7.49	18.90
tblLandUse	LotAcreage	0.29	22.80

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LotAcreage	6.11	9.20
tblLandUse	LotAcreage	0.19	0.00
tblLandUse	LotAcreage	42.44	97.10
tblLandUse	LotAcreage	786.69	1,057.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	4.91	2.62
tblVehicleTrips	ST_TR	1.96	1.05
tblVehicleTrips	ST_TR	8.14	4.35
tblVehicleTrips	ST_TR	2.21	1.18
tblVehicleTrips	ST_TR	3.74	2.00
tblVehicleTrips	ST_TR	7.72	4.12
tblVehicleTrips	ST_TR	1.64	0.88
tblVehicleTrips	ST_TR	5.99	3.20
tblVehicleTrips	ST_TR	9.54	5.11
tblVehicleTrips	SU_TR	4.09	2.19
tblVehicleTrips	SU_TR	2.19	1.17
tblVehicleTrips	SU_TR	6.28	3.36
tblVehicleTrips	SU_TR	0.70	0.37
tblVehicleTrips	SU_TR	3.74	2.00
tblVehicleTrips	SU_TR	6.77	3.62
tblVehicleTrips	SU_TR	0.76	0.41
tblVehicleTrips	SU_TR	27.63	14.76
tblVehicleTrips	SU_TR	8.55	4.57

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	2.91
tblVehicleTrips	WD_TR	33.33	17.81
tblVehicleTrips	WD_TR	0.78	0.42
tblVehicleTrips	WD_TR	7.32	3.91
tblVehicleTrips	WD_TR	19.52	10.43
tblVehicleTrips	WD_TR	9.74	5.20
tblVehicleTrips	WD_TR	3.74	2.00
tblVehicleTrips	WD_TR	22.59	12.07
tblVehicleTrips	WD_TR	10.72	5.73
tblVehicleTrips	WD_TR	11.07	5.91
tblVehicleTrips	WD_TR	6.95	3.72
tblVehicleTrips	WD_TR	9.44	5.04

2.0 Emissions Summary

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Energy	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
Mobile	246.4991	332.3289	2,579.7940	5.2738	525.7996	5.4183	531.2179	140.0559	5.0674	145.1234		538,501.7953	538,501.7953	38.3291	24.5806	546,785.0510
Total	**1,557.6603**	**456.6224**	**4,924.3905**	**10.7357**	**525.7996**	**316.9004**	**842.7000**	**140.0559**	**316.5495**	**456.6054**	**37,645.6451**	**657,986.6290**	**695,632.2740**	**151.9738**	**27.9909**	**707,772.9138**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Energy	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
Mobile	246.4991	332.3289	2,579.7940	5.2738	525.7996	5.4183	531.2179	140.0559	5.0674	145.1234		538,501.7953	538,501.7953	38.3291	24.5806	546,785.0510
Total	**1,557.6603**	**456.6224**	**4,924.3905**	**10.7357**	**525.7996**	**316.9004**	**842.7000**	**140.0559**	**316.5495**	**456.6054**	**37,645.6451**	**657,986.6290**	**695,632.2740**	**151.9738**	**27.9909**	**707,772.9138**

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	246.4991	332.3289	2,579.7940	5.2738	525.7996	5.4183	531.2179	140.0559	5.0674	145.1234		538,501.7953	538,501.7953	38.3291	24.5806	546,785.0510
Unmitigated	246.4991	332.3289	2,579.7940	5.2738	525.7996	5.4183	531.2179	140.0559	5.0674	145.1234		538,501.7953	538,501.7953	38.3291	24.5806	546,785.0510

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	675.12	607.84	508.08	2,192,601	2,192,601
Arena	67.68	0.00	0.00	104,345	104,345
City Park	61.74	154.35	171.99	261,050	261,050
Condo/Townhouse	2,654.89	2,953.65	2281.44	9,035,701	9,035,701
Condo/Townhouse	11.73	13.05	10.08	39,922	39,922
Elementary School	48,749.82	0.00	0.00	120,007,566	120,007,566
General Office Building	2,217.90	503.29	157.81	5,407,740	5,407,740
General Office Building	2,623.56	595.35	186.68	6,396,810	6,396,810
Golf Course	236.20	236.20	236.20	575,268	575,268
Government Office Building	1,159.08	0.00	0.00	1,949,547	1,949,547
Hospital	137.12	98.59	86.63	482,286	482,286
Office Park	1,926.96	286.92	133.68	4,853,375	4,853,375
Place of Worship	47.32	40.70	187.75	141,691	141,691

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	12,211.92	12,381.53	11073.11	41,256,857	41,256,857
Total	72,781.03	17,871.48	15,033.44	192,704,760	192,704,760

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Golf Course	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Government Office Building	16.60	8.40	6.90	33.00	62.00	5.00	50	34	16
Hospital	16.60	8.40	6.90	64.90	16.10	19.00	73	25	2
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Place of Worship	16.60	8.40	6.90	0.00	95.00	5.00	64	25	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Arena	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
City Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Condo/Townhouse	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Elementary School	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
General Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Golf Course	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Government Office Building	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Hospital	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Office Park	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Place of Worship	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425
Single Family Housing	0.548812	0.060892	0.186048	0.127862	0.022726	0.005730	0.010818	0.008022	0.000956	0.000624	0.023397	0.000686	0.003425

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209
NaturalGas Unmitigated	4.2759	37.7152	24.1726	0.2332		2.9542	2.9542		2.9542	2.9542		46,645.7286	46,645.7286	0.8940	0.8552	46,922.9209

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	7086.88	0.0764	0.6531	0.2779	4.1700e-003		0.0528	0.0528		0.0528	0.0528		833.7508	833.7508	0.0160	0.0153	838.7054
Arena	9414.69	0.1015	0.9230	0.7753	5.5400e-003		0.0702	0.0702		0.0702	0.0702		1,107.6104	1,107.6104	0.0212	0.0203	1,114.1924
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	135.661	1.4600e-003	0.0125	5.3200e-003	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003		15.9601	15.9601	3.1000e-004	2.9000e-004	16.0550
Condo/Townhouse	30704.6	0.3311	2.8296	1.2041	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.3106	3,612.3106	0.0692	0.0662	3,633.7768
Elementary School	150336	1.6213	14.7389	12.3806	0.0884		1.1202	1.1202		1.1202	1.1202		17,686.6269	17,686.6269	0.3390	0.3243	17,791.7297
General Office Building	10575.5	0.1141	1.0368	0.8709	6.2200e-003		0.0788	0.0788		0.0788	0.0788		1,244.1715	1,244.1715	0.0239	0.0228	1,251.5650
General Office Building	12509.6	0.1349	1.2264	1.0302	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.7182	1,471.7182	0.0282	0.0270	1,480.4638
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	2381.12	0.0257	0.2334	0.1961	1.4000e-003		0.0177	0.0177		0.0177	0.0177		280.1314	280.1314	5.3700e-003	5.1400e-003	281.7961
Hospital	3911.73	0.0422	0.3835	0.3221	2.3000e-003		0.0292	0.0292		0.0292	0.0292		460.2041	460.2041	8.8200e-003	8.4400e-003	462.9388
Office Park	10067.4	0.1086	0.9870	0.8291	5.9200e-003		0.0750	0.0750		0.0750	0.0750		1,184.4053	1,184.4053	0.0227	0.0217	1,191.4436
Place of Worship	723.358	7.8000e-003	0.0709	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003		85.1009	85.1009	1.6300e-003	1.5600e-003	85.6067
Single Family Housing	158642	1.7108	14.6199	6.2213	0.0933		1.1820	1.1820		1.1820	1.1820		18,663.7384	18,663.7384	0.3577	0.3422	18,774.6476
Total		**4.2759**	**37.7151**	**24.1726**	**0.2332**		**2.9542**	**2.9542**		**2.9542**	**2.9542**		**46,645.7286**	**46,645.7286**	**0.8941**	**0.8552**	**46,922.9209**

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.08688	0.0764	0.6531	0.2779	4.1700e-003		0.0528	0.0528		0.0528	0.0528		833.7508	833.7508	0.0160	0.0153	838.7054
Arena	9.41469	0.1015	0.9230	0.7753	5.5400e-003		0.0702	0.0702		0.0702	0.0702		1,107.6104	1,107.6104	0.0212	0.0203	1,114.1924
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0.135661	1.4600e-003	0.0125	5.3200e-003	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003		15.9601	15.9601	3.1000e-004	2.9000e-004	16.0550
Condo/Townhouse	30.7046	0.3311	2.8296	1.2041	0.0181		0.2288	0.2288		0.2288	0.2288		3,612.3106	3,612.3106	0.0692	0.0662	3,633.7768
Elementary School	150.336	1.6213	14.7389	12.3806	0.0884		1.1202	1.1202		1.1202	1.1202		17,686.6269	17,686.6269	0.3390	0.3243	17,791.7297
General Office Building	10.5755	0.1141	1.0368	0.8709	6.2200e-003		0.0788	0.0788		0.0788	0.0788		1,244.1715	1,244.1715	0.0239	0.0228	1,251.5650
General Office Building	12.5096	0.1349	1.2264	1.0302	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.7182	1,471.7182	0.0282	0.0270	1,480.4638
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Government Office Building	2.38112	0.0257	0.2334	0.1961	1.4000e-003		0.0177	0.0177		0.0177	0.0177		280.1314	280.1314	5.3700e-003	5.1400e-003	281.7961
Hospital	3.91173	0.0422	0.3835	0.3221	2.3000e-003		0.0292	0.0292		0.0292	0.0292		460.2041	460.2041	8.8200e-003	8.4400e-003	462.9388
Office Park	10.0674	0.1086	0.9870	0.8291	5.9200e-003		0.0750	0.0750		0.0750	0.0750		1,184.4053	1,184.4053	0.0227	0.0217	1,191.4436
Place of Worship	0.723358	7.8000e-003	0.0709	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003		85.1009	85.1009	1.6300e-003	1.5600e-003	85.6067
Single Family Housing	158.642	1.7108	14.6199	6.2213	0.0933		1.1820	1.1820		1.1820	1.1820		18,663.7384	18,663.7384	0.3577	0.3422	18,774.6476
Total		**4.2759**	**37.7151**	**24.1726**	**0.2332**		**2.9542**	**2.9542**		**2.9542**	**2.9542**		**46,645.7286**	**46,645.7286**	**0.8941**	**0.8552**	**46,922.9209**

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	lb/day										lb/day					
Mitigated	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420
Unmitigated	1,306.8853	86.5783	2,320.4239	5.2287		308.5278	308.5278		308.5278	308.5278	37,645.6451	72,839.1050	110,484.7501	112.7507	2.5551	114,064.9420

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.9541					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.3884					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,053.1227	83.3875	2,043.8698	5.2141		307.0047	307.0047		307.0047	307.0047	37,645.6451	72,342.0000	109,987.6451	112.2666	2.5551	113,555.7353
Landscaping	8.4202	3.1908	276.5540	0.0146		1.5232	1.5232		1.5232	1.5232		497.1050	497.1050	0.4841		509.2067
Total	**1,306.8853**	**86.5783**	**2,320.4239**	**5.2287**		**308.5278**	**308.5278**		**308.5278**	**308.5278**	**37,645.6451**	**72,839.1050**	**110,484.7501**	**112.7507**	**2.5551**	**114,064.9420**

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	16.9541					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.3884					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,053.1227	83.3875	2,043.8698	5.2141		307.0047	307.0047		307.0047	307.0047	37,645.6451	72,342.0000	109,987.6451	112.2666	2.5551	113,555.7353
Landscaping	8.4202	3.1908	276.5540	0.0146		1.5232	1.5232		1.5232	1.5232		497.1050	497.1050	0.4841		509.2067
Total	**1,306.8853**	**86.5783**	**2,320.4239**	**5.2287**		**308.5278**	**308.5278**		**308.5278**	**308.5278**	**37,645.6451**	**72,839.1050**	**110,484.7501**	**112.7507**	**2.5551**	**114,064.9420**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU Existing Condition - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU High-build

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	1,362.81	1000sqft	93.00	1,362,810.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	2,092.00	Dwelling Unit	0.00	2,092,000.00	5983
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	2,141.00	Dwelling Unit	874.00	3,853,800.00	6123
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=221,051,250

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblConstructionPhase	PhaseEndDate	6/28/2044	6/29/2021
tblLandUse	LotAcreage	31.29	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	55.05	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	695.13	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.13

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	4.91	2.49
tblVehicleTrips	ST_TR	1.96	0.99
tblVehicleTrips	ST_TR	2.21	1.12
tblVehicleTrips	ST_TR	1.64	0.83
tblVehicleTrips	ST_TR	46.12	23.41
tblVehicleTrips	ST_TR	9.54	4.83
tblVehicleTrips	SU_TR	6.28	3.19
tblVehicleTrips	SU_TR	4.09	2.08
tblVehicleTrips	SU_TR	2.19	1.11
tblVehicleTrips	SU_TR	0.70	0.36
tblVehicleTrips	SU_TR	0.76	0.39
tblVehicleTrips	SU_TR	21.10	10.71
tblVehicleTrips	SU_TR	8.55	4.33
tblVehicleTrips	WD_TR	7.32	3.71
tblVehicleTrips	WD_TR	5.44	2.76
tblVehicleTrips	WD_TR	0.78	0.40
tblVehicleTrips	WD_TR	19.52	9.91
tblVehicleTrips	WD_TR	9.74	4.94
tblVehicleTrips	WD_TR	11.07	5.62
tblVehicleTrips	WD_TR	37.75	19.16
tblVehicleTrips	WD_TR	9.44	4.79

2.0 Emissions Summary

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	91.3280	3.3594	122.8684	0.1723		10.2823	10.2823		10.2823	10.2823	1,108.8209	2,223.5146	3,332.3354	3.3953	0.0753	3,439.6445
Energy	0.9043	7.9570	4.9714	0.0493		0.6248	0.6248		0.6248	0.6248	0.0000	19,349.0782	19,349.0782	0.1715	0.1641	19,402.2595
Mobile	27.5678	26.6414	279.5684	0.6005	83.1112	0.3067	83.4179	22.1832	0.2860	22.4691	0.0000	60,798.7425	60,798.7425	4.0666	2.4700	61,636.4721
Waste						0.0000	0.0000		0.0000	0.0000	2,567.5109	0.0000	2,567.5109	151.7356	0.0000	6,360.8996
Water						0.0000	0.0000		0.0000	0.0000	243.3664	2,536.2568	2,779.6232	24.9961	0.5902	3,580.4077
Total	**119.8000**	**37.9579**	**407.4083**	**0.8221**	**83.1112**	**11.2137**	**94.3249**	**22.1832**	**11.1930**	**33.3762**	**3,919.6981**	**84,907.5920**	**88,827.2901**	**184.3650**	**3.2996**	**94,419.6833**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	91.3280	3.3594	122.8684	0.1723		10.2823	10.2823		10.2823	10.2823	1,108.8209	2,223.5146	3,332.3354	3.3953	0.0753	3,439.6445
Energy	0.9043	7.9570	4.9714	0.0493		0.6248	0.6248		0.6248	0.6248	0.0000	19,349.0782	19,349.0782	0.1715	0.1641	19,402.2595
Mobile	27.5678	26.6414	279.5684	0.6005	83.1112	0.3067	83.4179	22.1832	0.2860	22.4691	0.0000	60,798.7425	60,798.7425	4.0666	2.4700	61,636.4721
Waste						0.0000	0.0000		0.0000	0.0000	2,567.5109	0.0000	2,567.5109	151.7356	0.0000	6,360.8996
Water						0.0000	0.0000		0.0000	0.0000	243.3664	2,536.2568	2,779.6232	24.9961	0.5902	3,580.4077
Total	**119.8000**	**37.9579**	**407.4083**	**0.8221**	**83.1112**	**11.2137**	**94.3249**	**22.1832**	**11.1930**	**33.3762**	**3,919.6981**	**84,907.5920**	**88,827.2901**	**184.3650**	**3.2996**	**94,419.6833**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/30/2021	6/29/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	27.5678	26.6414	279.5684	0.6005	83.1112	0.3067	83.4179	22.1832	0.2860	22.4691	0.0000	60,798.7425	60,798.7425	4.0666	2.4700	61,636.4721
Unmitigated	27.5678	26.6414	279.5684	0.6005	83.1112	0.3067	83.4179	22.1832	0.2860	22.4691	0.0000	60,798.7425	60,798.7425	4.0666	2.4700	61,636.4721

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,044.21	2,275.63	1757.69	6,958,478	6,958,478
Apartments Mid Rise	1,874.04	1,690.71	1412.32	6,088,989	6,088,989
Apartments Mid Rise	5,773.92	5,209.08	4351.36	18,760,184	18,760,184
City Park	33.20	82.17	92.13	139,890	139,890
Elementary School	55,258.16	0.00	0.00	136,029,164	136,029,164
General Office Building	6,732.28	1,526.35	490.61	16,419,495	16,419,495
Office Park	87.05	12.86	6.04	219,210	219,210
Regional Shopping Center	627.11	766.21	350.54	1,313,860	1,313,860
Single Family Housing	153.28	154.56	138.56	517,220	517,220
Single Family Housing	10,255.39	10,341.03	9270.53	34,605,258	34,605,258
Total	82,838.64	22,058.59	17,869.78	221,051,748	221,051,748

4.3 Trip Type Information

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,399.7685	10,399.7685	0.0000	0.0000	10,399.7685
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	10,399.7685	10,399.7685	0.0000	0.0000	10,399.7685
NaturalGas Mitigated	0.9043	7.9570	4.9714	0.0493		0.6248	0.6248		0.6248	0.6248	0.0000	8,949.3097	8,949.3097	0.1715	0.1641	9,002.4909
NaturalGas Unmitigated	0.9043	7.9570	4.9714	0.0493		0.6248	0.6248		0.6248	0.6248	0.0000	8,949.3097	8,949.3097	0.1715	0.1641	9,002.4909

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	6.84295e+006	0.0369	0.3153	0.1342	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	365.1657	365.1657	7.0000e-003	6.6900e-003	367.3357
Apartments Mid Rise	2.3325e+007	0.1258	1.0748	0.4574	6.8600e-003		0.0869	0.0869		0.0869	0.0869	0.0000	1,244.7111	1,244.7111	0.0239	0.0228	1,252.1078
Apartments Mid Rise	7.57059e+006	0.0408	0.3488	0.1484	2.2300e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.9956	403.9956	7.7400e-003	7.4100e-003	406.3964
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	6.54622e+007	0.3530	3.2089	2.6955	0.0193		0.2439	0.2439		0.2439	0.2439	0.0000	3,493.3144	3,493.3144	0.0670	0.0640	3,514.0734
General Office Building	1.23334e+007	0.0665	0.6046	0.5079	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.1588	658.1588	0.0126	0.0121	662.0699
Office Park	174572	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	9.3158	9.3158	1.8000e-004	1.7000e-004	9.3712
Regional Shopping Center	65132.7	3.5000e-004	3.1900e-003	2.6800e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4757	3.4757	7.0000e-005	6.0000e-005	3.4964
Single Family Housing	5.11651e+007	0.2759	2.3576	1.0032	0.0151		0.1906	0.1906		0.1906	0.1906	0.0000	2,730.3637	2,730.3637	0.0523	0.0501	2,746.5889
Single Family Housing	764728	4.1200e-003	0.0352	0.0150	2.2000e-004		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	40.8088	40.8088	7.8000e-004	7.5000e-004	41.0513
Total		**0.9043**	**7.9570**	**4.9714**	**0.0493**		**0.6248**	**0.6248**		**0.6248**	**0.6248**	**0.0000**	**8,949.3097**	**8,949.3097**	**0.1715**	**0.1641**	**9,002.4909**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	6.84295e+006	0.0369	0.3153	0.1342	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	365.1657	365.1657	7.0000e-003	6.6900e-003	367.3357
Apartments Mid Rise	2.3325e+007	0.1258	1.0748	0.4574	6.8600e-003		0.0869	0.0869		0.0869	0.0869	0.0000	1,244.7111	1,244.7111	0.0239	0.0228	1,252.1078
Apartments Mid Rise	7.57059e+006	0.0408	0.3488	0.1484	2.2300e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.9956	403.9956	7.7400e-003	7.4100e-003	406.3964
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	6.54622e+007	0.3530	3.2089	2.6955	0.0193		0.2439	0.2439		0.2439	0.2439	0.0000	3,493.3144	3,493.3144	0.0670	0.0640	3,514.0734
General Office Building	1.23334e+007	0.0665	0.6046	0.5079	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.1588	658.1588	0.0126	0.0121	662.0699
Office Park	174572	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	9.3158	9.3158	1.8000e-004	1.7000e-004	9.3712
Regional Shopping Center	65132.7	3.5000e-004	3.1900e-003	2.6800e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4757	3.4757	7.0000e-005	6.0000e-005	3.4964
Single Family Housing	5.11651e+007	0.2759	2.3576	1.0032	0.0151		0.1906	0.1906		0.1906	0.1906	0.0000	2,730.3637	2,730.3637	0.0523	0.0501	2,746.5889
Single Family Housing	764728	4.1200e-003	0.0352	0.0150	2.2000e-004		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	40.8088	40.8088	7.8000e-004	7.5000e-004	41.0513
Total		**0.9043**	**7.9570**	**4.9714**	**0.0493**		**0.6248**	**0.6248**		**0.6248**	**0.6248**	**0.0000**	**8,949.3097**	**8,949.3097**	**0.1715**	**0.1641**	**9,002.4909**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.21547e+006	282.3828	0.0000	0.0000	282.3828
Apartments Mid Rise	2.60317e+006	331.7987	0.0000	0.0000	331.7987
Apartments Mid Rise	8.02037e+006	1,022.2723	0.0000	0.0000	1,022.2723
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	3.27869e+007	4,178.9979	0.0000	0.0000	4,178.9979
General Office Building	1.83843e+007	2,343.2538	0.0000	0.0000	2,343.2538
Office Park	229562	29.2598	0.0000	0.0000	29.2598
Regional Shopping Center	364285	46.4316	0.0000	0.0000	46.4316
Single Family Housing	1.67385e+007	2,133.4840	0.0000	0.0000	2,133.4840
Single Family Housing	250179	31.8877	0.0000	0.0000	31.8877
Total		**10,399.7685**	**0.0000**	**0.0000**	**10,399.7685**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.21547e+006	282.3828	0.0000	0.0000	282.3828
Apartments Mid Rise	2.60317e+006	331.7987	0.0000	0.0000	331.7987
Apartments Mid Rise	8.02037e+006	1,022.2723	0.0000	0.0000	1,022.2723
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	3.27869e+007	4,178.9979	0.0000	0.0000	4,178.9979
General Office Building	1.83843e+007	2,343.2538	0.0000	0.0000	2,343.2538
Office Park	229562	29.2598	0.0000	0.0000	29.2598
Regional Shopping Center	364285	46.4316	0.0000	0.0000	46.4316
Single Family Housing	1.67385e+007	2,133.4840	0.0000	0.0000	2,133.4840
Single Family Housing	250179	31.8877	0.0000	0.0000	31.8877
Total		**10,399.7685**	**0.0000**	**0.0000**	**10,399.7685**

6.0 Area Detail

6.1 Mitigation Measures Area

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	91.3280	3.3594	122.8684	0.1723		10.2823	10.2823		10.2823	10.2823	1,108.8209	2,223.5146	3,332.3354	3.3953	0.0753	3,439.6445
Unmitigated	91.3280	3.3594	122.8684	0.1723		10.2823	10.2823		10.2823	10.2823	1,108.8209	2,223.5146	3,332.3354	3.3953	0.0753	3,439.6445

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.8907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	51.5493					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	34.1924	2.7074	66.3597	0.1693		9.9677	9.9677		9.9677	9.9677	1,108.8209	2,130.7728	3,239.5937	3.3067	0.0753	3,344.6888
Landscaping	1.6957	0.6520	56.5088	3.0000e-003		0.3146	0.3146		0.3146	0.3146	0.0000	92.7417	92.7417	0.0886	0.0000	94.9557
Total	**91.3280**	**3.3594**	**122.8684**	**0.1723**		**10.2823**	**10.2823**		**10.2823**	**10.2823**	**1,108.8209**	**2,223.5146**	**3,332.3354**	**3.3953**	**0.0753**	**3,439.6445**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.8907					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	51.5493					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	34.1924	2.7074	66.3597	0.1693		9.9677	9.9677		9.9677	9.9677	1,108.8209	2,130.7728	3,239.5937	3.3067	0.0753	3,344.6888
Landscaping	1.6957	0.6520	56.5088	3.0000e-003		0.3146	0.3146		0.3146	0.3146	0.0000	92.7417	92.7417	0.0886	0.0000	94.9557
Total	**91.3280**	**3.3594**	**122.8684**	**0.1723**		**10.2823**	**10.2823**		**10.2823**	**10.2823**	**1,108.8209**	**2,223.5146**	**3,332.3354**	**3.3953**	**0.0753**	**3,439.6445**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,779.6232	24.9961	0.5902	3,580.4077
Unmitigated	2,779.6232	24.9961	0.5902	3,580.4077

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.8999 / 22.6325	103.0199	1.1698	0.0276	140.4961
Apartments Mid Rise	180.542 / 113.82	518.0911	5.8830	0.1389	706.5600
City Park	0 / 98.893	140.0398	0.0000	0.0000	140.0398
Elementary School	161.687 / 415.766	908.3950	5.2686	0.1244	1,077.1810
General Office Building	242.217 / 148.456	689.0647	7.8927	0.1864	941.9172
Office Park	2.7531 / 1.68738	7.8321	0.0897	2.1200e-003	10.7060
Regional Shopping Center	2.42439 / 1.48592	6.8970	0.0790	1.8700e-003	9.4278
Single Family Housing	141.58 / 89.2568	406.2836	4.6134	0.1089	554.0797
Total		**2,779.6232**	**24.9961**	**0.5902**	**3,580.4077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.8999 / 22.6325	103.0199	1.1698	0.0276	140.4961
Apartments Mid Rise	180.542 / 113.82	518.0911	5.8830	0.1389	706.5600
City Park	0 / 98.893	140.0398	0.0000	0.0000	140.0398
Elementary School	161.687 / 415.766	908.3950	5.2686	0.1244	1,077.1810
General Office Building	242.217 / 148.456	689.0647	7.8927	0.1864	941.9172
Office Park	2.7531 / 1.68738	7.8321	0.0897	2.1200e-003	10.7060
Regional Shopping Center	2.42439 / 1.48592	6.8970	0.0790	1.8700e-003	9.4278
Single Family Housing	141.58 / 89.2568	406.2836	4.6134	0.1089	554.0797
Total		**2,779.6232**	**24.9961**	**0.5902**	**3,580.4077**

8.0 Waste Detail

8.1 Mitigation Measures Waste

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2,567.5109	151.7356	0.0000	6,360.8996
Unmitigated	2,567.5109	151.7356	0.0000	6,360.8996

RHE GPU High-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	1274.66	258.7445	15.2914	0.0000	641.0285
City Park	7.14	1.4494	0.0857	0.0000	3.5907
Elementary School	7248.8	1,471.4409	86.9597	0.0000	3,645.4325
General Office Building	1267.41	257.2728	15.2044	0.0000	637.3824
Office Park	14.41	2.9251	0.1729	0.0000	7.2468
Regional Shopping Center	34.37	6.9768	0.4123	0.0000	17.2847
Single Family Housing	2548.15	517.2514	30.5687	0.0000	1,281.4685
Total		**2,567.5109**	**151.7356**	**0.0000**	**6,360.8996**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	1274.66	258.7445	15.2914	0.0000	641.0285
City Park	7.14	1.4494	0.0857	0.0000	3.5907
Elementary School	7248.8	1,471.4409	86.9597	0.0000	3,645.4325
General Office Building	1267.41	257.2728	15.2044	0.0000	637.3824
Office Park	14.41	2.9251	0.1729	0.0000	7.2468
Regional Shopping Center	34.37	6.9768	0.4123	0.0000	17.2847
Single Family Housing	2548.15	517.2514	30.5687	0.0000	1,281.4685
Total		**2,567.5109**	**151.7356**	**0.0000**	**6,360.8996**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU High-build

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,362.81	1000sqft	93.00	1,362,810.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	2,092.00	Dwelling Unit	0.00	2,092,000.00	5983
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	2,141.00	Dwelling Unit	874.00	3,853,800.00	6123
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=221,051,250

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblConstructionPhase	PhaseEndDate	6/28/2044	6/29/2021
tblLandUse	LotAcreage	31.29	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	55.05	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	695.13	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.13

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	4.91	2.49
tblVehicleTrips	ST_TR	1.96	0.99
tblVehicleTrips	ST_TR	2.21	1.12
tblVehicleTrips	ST_TR	1.64	0.83
tblVehicleTrips	ST_TR	46.12	23.41
tblVehicleTrips	ST_TR	9.54	4.83
tblVehicleTrips	SU_TR	6.28	3.19
tblVehicleTrips	SU_TR	4.09	2.08
tblVehicleTrips	SU_TR	2.19	1.11
tblVehicleTrips	SU_TR	0.70	0.36
tblVehicleTrips	SU_TR	0.76	0.39
tblVehicleTrips	SU_TR	21.10	10.71
tblVehicleTrips	SU_TR	8.55	4.33
tblVehicleTrips	WD_TR	7.32	3.71
tblVehicleTrips	WD_TR	5.44	2.76
tblVehicleTrips	WD_TR	0.78	0.40
tblVehicleTrips	WD_TR	19.52	9.91
tblVehicleTrips	WD_TR	9.74	4.94
tblVehicleTrips	WD_TR	11.07	5.62
tblVehicleTrips	WD_TR	37.75	19.16
tblVehicleTrips	WD_TR	9.44	4.79

2.0 Emissions Summary

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Energy	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
Mobile	200.5394	172.2278	1,978.6540	4.3774	598.6067	2.1679	600.7746	159.5238	2.0215	161.5452		488,630.0828	488,630.0828	31.0977	18.3802	494,884.8103
Total	**3,258.2337**	**437.6360**	**7,766.7375**	**18.2148**	**598.6067**	**805.5256**	**1,404.1323**	**159.5238**	**805.3792**	**964.9029**	**97,781.2612**	**731,404.3100**	**829,185.5712**	**324.5173**	**26.0079**	**845,048.8424**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Energy	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
Mobile	200.5394	172.2278	1,978.6540	4.3774	598.6067	2.1679	600.7746	159.5238	2.0215	161.5452		488,630.0828	488,630.0828	31.0977	18.3802	494,884.8103
Total	**3,258.2337**	**437.6360**	**7,766.7375**	**18.2148**	**598.6067**	**805.5256**	**1,404.1323**	**159.5238**	**805.3792**	**964.9029**	**97,781.2612**	**731,404.3100**	**829,185.5712**	**324.5173**	**26.0079**	**845,048.8424**

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/30/2021	6/29/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	200.5394	172.2278	1,978.6540	4.3774	598.6067	2.1679	600.7746	159.5238	2.0215	161.5452		488,630.0828	488,630.0828	31.0977	18.3802	494,884.8103
Unmitigated	200.5394	172.2278	1,978.6540	4.3774	598.6067	2.1679	600.7746	159.5238	2.0215	161.5452		488,630.0828	488,630.0828	31.0977	18.3802	494,884.8103

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,044.21	2,275.63	1757.69	6,958,478	6,958,478
Apartments Mid Rise	1,874.04	1,690.71	1412.32	6,088,989	6,088,989
Apartments Mid Rise	5,773.92	5,209.08	4351.36	18,760,184	18,760,184
City Park	33.20	82.17	92.13	139,890	139,890
Elementary School	55,258.16	0.00	0.00	136,029,164	136,029,164
General Office Building	6,732.28	1,526.35	490.61	16,419,495	16,419,495
Office Park	87.05	12.86	6.04	219,210	219,210
Regional Shopping Center	627.11	766.21	350.54	1,313,860	1,313,860
Single Family Housing	153.28	154.56	138.56	517,220	517,220
Single Family Housing	10,255.39	10,341.03	9270.53	34,605,258	34,605,258
Total	82,838.64	22,058.59	17,869.78	221,051,748	221,051,748

4.3 Trip Type Information

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
NaturalGas Unmitigated	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	18747.8	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20741.3	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	63904.1	0.6892	5.8892	2.5060	0.0376		0.4762	0.4762		0.4762	0.4762		7,518.1322	7,518.1322	0.1441	0.1378	7,562.8087
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	33790.2	0.3644	3.3128	2.7827	0.0199		0.2518	0.2518		0.2518	0.2518		3,975.3201	3,975.3201	0.0762	0.0729	3,998.9434
Office Park	478.28	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	178.446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	140178	1.5117	12.9184	5.4972	0.0825		1.0445	1.0445		1.0445	1.0445		16,491.5658	16,491.5658	0.3161	0.3024	16,589.5669
Single Family Housing	2095.15	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.9550**	**43.6002**	**27.2407**	**0.2703**		**3.4234**	**3.4234**		**3.4234**	**3.4234**		**54,054.3850**	**54,054.3850**	**1.0360**	**0.9910**	**54,375.6032**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	18.7478	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20.7413	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	63.9041	0.6892	5.8892	2.5060	0.0376		0.4762	0.4762		0.4762	0.4762		7,518.1322	7,518.1322	0.1441	0.1378	7,562.8087
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179.349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	33.7902	0.3644	3.3128	2.7827	0.0199		0.2518	0.2518		0.2518	0.2518		3,975.3201	3,975.3201	0.0762	0.0729	3,998.9434
Office Park	0.47828	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	0.178446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	140.178	1.5117	12.9184	5.4972	0.0825		1.0445	1.0445		1.0445	1.0445		16,491.5658	16,491.5658	0.3161	0.3024	16,589.5669
Single Family Housing	2.09515	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.9550**	**43.6002**	**27.2407**	**0.2703**		**3.4234**	**3.4234**		**3.4234**	**3.4234**		**54,054.3850**	**54,054.3850**	**1.0360**	**0.9910**	**54,375.6032**

6.0 Area Detail

6.1 Mitigation Measures Area

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Unmitigated	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.3186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	282.4616					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,735.3938	216.5917	5,308.7727	13.5431		797.4177	797.4177		797.4177	797.4177	97,781.2612	187,902.0000	285,683.2612	291.6026	6.6367	294,951.0626
Landscaping	13.5652	5.2162	452.0702	0.0240		2.5166	2.5166		2.5166	2.5166		817.8422	817.8422	0.7810		837.3663
Total	**3,052.7393**	**221.8079**	**5,760.8428**	**13.5671**		**799.9343**	**799.9343**		**799.9343**	**799.9343**	**97,781.2612**	**188,719.8422**	**286,501.1034**	**292.3836**	**6.6367**	**295,788.4289**

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.3186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	282.4616					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,735.3938	216.5917	5,308.7727	13.5431		797.4177	797.4177		797.4177	797.4177	97,781.2612	187,902.0000	285,683.2612	291.6026	6.6367	294,951.0626
Landscaping	13.5652	5.2162	452.0702	0.0240		2.5166	2.5166		2.5166	2.5166		817.8422	817.8422	0.7810		837.3663
Total	**3,052.7393**	**221.8079**	**5,760.8428**	**13.5671**		**799.9343**	**799.9343**		**799.9343**	**799.9343**	**97,781.2612**	**188,719.8422**	**286,501.1034**	**292.3836**	**6.6367**	**295,788.4289**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU High-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU High-build

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	1,362.81	1000sqft	93.00	1,362,810.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	2,092.00	Dwelling Unit	0.00	2,092,000.00	5983
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	2,141.00	Dwelling Unit	874.00	3,853,800.00	6123
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=221,051,250

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblConstructionPhase	PhaseEndDate	6/28/2044	6/29/2021
tblLandUse	LotAcreage	31.29	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	55.05	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	695.13	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.13

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	4.91	2.49
tblVehicleTrips	ST_TR	1.96	0.99
tblVehicleTrips	ST_TR	2.21	1.12
tblVehicleTrips	ST_TR	1.64	0.83
tblVehicleTrips	ST_TR	46.12	23.41
tblVehicleTrips	ST_TR	9.54	4.83
tblVehicleTrips	SU_TR	6.28	3.19
tblVehicleTrips	SU_TR	4.09	2.08
tblVehicleTrips	SU_TR	2.19	1.11
tblVehicleTrips	SU_TR	0.70	0.36
tblVehicleTrips	SU_TR	0.76	0.39
tblVehicleTrips	SU_TR	21.10	10.71
tblVehicleTrips	SU_TR	8.55	4.33
tblVehicleTrips	WD_TR	7.32	3.71
tblVehicleTrips	WD_TR	5.44	2.76
tblVehicleTrips	WD_TR	0.78	0.40
tblVehicleTrips	WD_TR	19.52	9.91
tblVehicleTrips	WD_TR	9.74	4.94
tblVehicleTrips	WD_TR	11.07	5.62
tblVehicleTrips	WD_TR	37.75	19.16
tblVehicleTrips	WD_TR	9.44	4.79

2.0 Emissions Summary

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Energy	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
Mobile	197.3914	185.8576	1,964.1184	4.1979	598.6067	2.1687	600.7755	159.5238	2.0223	161.5460		468,454.9588	468,454.9588	31.7978	19.1215	474,948.1151
Total	**3,255.0856**	**451.2658**	**7,752.2019**	**18.0353**	**598.6067**	**805.5264**	**1,404.1332**	**159.5238**	**805.3800**	**964.9037**	**97,781.2612**	**711,229.1860**	**809,010.4471**	**325.2174**	**26.7492**	**825,112.1472**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Energy	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
Mobile	197.3914	185.8576	1,964.1184	4.1979	598.6067	2.1687	600.7755	159.5238	2.0223	161.5460		468,454.9588	468,454.9588	31.7978	19.1215	474,948.1151
Total	**3,255.0856**	**451.2658**	**7,752.2019**	**18.0353**	**598.6067**	**805.5264**	**1,404.1332**	**159.5238**	**805.3800**	**964.9037**	**97,781.2612**	**711,229.1860**	**809,010.4471**	**325.2174**	**26.7492**	**825,112.1472**

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/30/2021	6/29/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	197.3914	185.8576	1,964.1184	4.1979	598.6067	2.1687	600.7755	159.5238	2.0223	161.5460		468,454.9588	468,454.9588	31.7978	19.1215	474,948.1151
Unmitigated	197.3914	185.8576	1,964.1184	4.1979	598.6067	2.1687	600.7755	159.5238	2.0223	161.5460		468,454.9588	468,454.9588	31.7978	19.1215	474,948.1151

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,044.21	2,275.63	1757.69	6,958,478	6,958,478
Apartments Mid Rise	1,874.04	1,690.71	1412.32	6,088,989	6,088,989
Apartments Mid Rise	5,773.92	5,209.08	4351.36	18,760,184	18,760,184
City Park	33.20	82.17	92.13	139,890	139,890
Elementary School	55,258.16	0.00	0.00	136,029,164	136,029,164
General Office Building	6,732.28	1,526.35	490.61	16,419,495	16,419,495
Office Park	87.05	12.86	6.04	219,210	219,210
Regional Shopping Center	627.11	766.21	350.54	1,313,860	1,313,860
Single Family Housing	153.28	154.56	138.56	517,220	517,220
Single Family Housing	10,255.39	10,341.03	9270.53	34,605,258	34,605,258
Total	82,838.64	22,058.59	17,869.78	221,051,748	221,051,748

4.3 Trip Type Information

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032
NaturalGas Unmitigated	4.9550	43.6002	27.2407	0.2703		3.4234	3.4234		3.4234	3.4234		54,054.3850	54,054.3850	1.0360	0.9910	54,375.6032

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	18747.8	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20741.3	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	63904.1	0.6892	5.8892	2.5060	0.0376		0.4762	0.4762		0.4762	0.4762		7,518.1322	7,518.1322	0.1441	0.1378	7,562.8087
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	33790.2	0.3644	3.3128	2.7827	0.0199		0.2518	0.2518		0.2518	0.2518		3,975.3201	3,975.3201	0.0762	0.0729	3,998.9434
Office Park	478.28	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	178.446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	140178	1.5117	12.9184	5.4972	0.0825		1.0445	1.0445		1.0445	1.0445		16,491.5658	16,491.5658	0.3161	0.3024	16,589.5669
Single Family Housing	2095.15	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.9550**	**43.6002**	**27.2407**	**0.2703**		**3.4234**	**3.4234**		**3.4234**	**3.4234**		**54,054.3850**	**54,054.3850**	**1.0360**	**0.9910**	**54,375.6032**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	18.7478	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20.7413	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	63.9041	0.6892	5.8892	2.5060	0.0376		0.4762	0.4762		0.4762	0.4762		7,518.1322	7,518.1322	0.1441	0.1378	7,562.8087
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179.349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	33.7902	0.3644	3.3128	2.7827	0.0199		0.2518	0.2518		0.2518	0.2518		3,975.3201	3,975.3201	0.0762	0.0729	3,998.9434
Office Park	0.47828	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	0.178446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	140.178	1.5117	12.9184	5.4972	0.0825		1.0445	1.0445		1.0445	1.0445		16,491.5658	16,491.5658	0.3161	0.3024	16,589.5669
Single Family Housing	2.09515	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.9550**	**43.6002**	**27.2407**	**0.2703**		**3.4234**	**3.4234**		**3.4234**	**3.4234**		**54,054.3850**	**54,054.3850**	**1.0360**	**0.9910**	**54,375.6032**

6.0 Area Detail

6.1 Mitigation Measures Area

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289
Unmitigated	3,052.7393	221.8080	5,760.8428	13.5671		799.9343	799.9343		799.9343	799.9343	97,781.2612	188,719.8422	286,501.1034	292.3836	6.6367	295,788.4289

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.3186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	282.4616					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,735.3938	216.5917	5,308.7727	13.5431		797.4177	797.4177		797.4177	797.4177	97,781.2612	187,902.0000	285,683.2612	291.6026	6.6367	294,951.0626
Landscaping	13.5652	5.2162	452.0702	0.0240		2.5166	2.5166		2.5166	2.5166		817.8422	817.8422	0.7810		837.3663
Total	**3,052.7393**	**221.8079**	**5,760.8428**	**13.5671**		**799.9343**	**799.9343**		**799.9343**	**799.9343**	**97,781.2612**	**188,719.8422**	**286,501.1034**	**292.3836**	**6.6367**	**295,788.4289**

RHE GPU High-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.3186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	282.4616					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,735.3938	216.5917	5,308.7727	13.5431		797.4177	797.4177		797.4177	797.4177	97,781.2612	187,902.0000	285,683.2612	291.6026	6.6367	294,951.0626
Landscaping	13.5652	5.2162	452.0702	0.0240		2.5166	2.5166		2.5166	2.5166		817.8422	817.8422	0.7810		837.3663
Total	**3,052.7393**	**221.8079**	**5,760.8428**	**13.5671**		**799.9343**	**799.9343**		**799.9343**	**799.9343**	**97,781.2612**	**188,719.8422**	**286,501.1034**	**292.3836**	**6.6367**	**295,788.4289**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Low-build

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	1,274.37	1000sqft	93.00	1,274,370.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	1,112.00	Dwelling Unit	0.00	1,112,000.00	3180
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	1,841.00	Dwelling Unit	874.00	3,313,800.00	5265
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=201,545,750

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LotAcreage	29.26	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	29.26	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	597.73	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.03
tblVehicleTrips	ST_TR	4.91	2.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	1.96	0.97
tblVehicleTrips	ST_TR	2.21	1.10
tblVehicleTrips	ST_TR	1.64	0.81
tblVehicleTrips	ST_TR	46.12	22.86
tblVehicleTrips	ST_TR	9.54	4.70
tblVehicleTrips	SU_TR	6.28	3.11
tblVehicleTrips	SU_TR	4.09	2.03
tblVehicleTrips	SU_TR	2.19	1.09
tblVehicleTrips	SU_TR	0.70	0.35
tblVehicleTrips	SU_TR	0.76	0.38
tblVehicleTrips	SU_TR	21.10	10.46
tblVehicleTrips	SU_TR	8.55	4.21
tblVehicleTrips	WD_TR	7.32	3.63
tblVehicleTrips	WD_TR	5.44	2.75
tblVehicleTrips	WD_TR	0.78	0.39
tblVehicleTrips	WD_TR	19.52	9.67
tblVehicleTrips	WD_TR	9.74	4.83
tblVehicleTrips	WD_TR	11.07	5.49
tblVehicleTrips	WD_TR	37.75	18.71
tblVehicleTrips	WD_TR	9.44	4.65

2.0 Emissions Summary

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	76.2415	2.5438	93.4514	0.1301		7.7647	7.7647		7.7647	7.7647	836.9000	1,679.4117	2,516.3117	2.5638	0.0568	2,597.3347
Energy	0.8024	7.0840	4.5836	0.0438		0.5544	0.5544		0.5544	0.5544	0.0000	17,410.8000	17,410.8000	0.1522	0.1456	17,457.9890
Mobile	25.1355	24.2911	254.9061	0.5475	75.7807	0.2796	76.0603	20.2266	0.2607	20.4873	0.0000	55,436.1121	55,436.1121	3.7078	2.2521	56,199.9398
Waste						0.0000	0.0000		0.0000	0.0000	2,387.8984	0.0000	2,387.8984	141.1208	0.0000	5,915.9172
Water						0.0000	0.0000		0.0000	0.0000	211.9215	2,283.6643	2,495.5858	21.7664	0.5140	3,192.9024
Total	**102.1794**	**33.9189**	**352.9412**	**0.7214**	**75.7807**	**8.5987**	**84.3793**	**20.2266**	**8.5798**	**28.8064**	**3,436.7199**	**76,809.9880**	**80,246.7080**	**169.3110**	**2.9685**	**85,364.0831**

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	76.2415	2.5438	93.4514	0.1301		7.7647	7.7647		7.7647	7.7647	836.9000	1,679.4117	2,516.3117	2.5638	0.0568	2,597.3347
Energy	0.8024	7.0840	4.5836	0.0438		0.5544	0.5544		0.5544	0.5544	0.0000	17,410.8000	17,410.8000	0.1522	0.1456	17,457.9890
Mobile	25.1355	24.2911	254.9061	0.5475	75.7807	0.2796	76.0603	20.2266	0.2607	20.4873	0.0000	55,436.1121	55,436.1121	3.7078	2.2521	56,199.9398
Waste						0.0000	0.0000		0.0000	0.0000	2,387.8984	0.0000	2,387.8984	141.1208	0.0000	5,915.9172
Water						0.0000	0.0000		0.0000	0.0000	211.9215	2,283.6643	2,495.5858	21.7664	0.5140	3,192.9024
Total	**102.1794**	**33.9189**	**352.9412**	**0.7214**	**75.7807**	**8.5987**	**84.3793**	**20.2266**	**8.5798**	**28.8064**	**3,436.7199**	**76,809.9880**	**80,246.7080**	**169.3110**	**2.9685**	**85,364.0831**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	25.1355	24.2911	254.9061	0.5475	75.7807	0.2796	76.0603	20.2266	0.2607	20.4873	0.0000	55,436.1121	55,436.1121	3.7078	2.2521	56,199.9398
Unmitigated	25.1355	24.2911	254.9061	0.5475	75.7807	0.2796	76.0603	20.2266	0.2607	20.4873	0.0000	55,436.1121	55,436.1121	3.7078	2.2521	56,199.9398

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,000.13	2,220.53	1713.61	6,802,471	6,802,471
Apartments Mid Rise	1,867.25	1,683.92	1378.37	6,052,528	6,052,528
Apartments Mid Rise	3,058.00	2,757.76	2257.36	9,912,240	9,912,240
City Park	32.37	80.51	90.47	136,819	136,819
Elementary School	53,919.92	0.00	0.00	132,734,815	132,734,815
General Office Building	6,155.21	1,401.81	446.03	15,013,790	15,013,790
Office Park	85.04	12.55	5.89	214,126	214,126
Regional Shopping Center	612.38	748.21	342.36	1,283,016	1,283,016
Single Family Housing	148.80	150.40	134.72	502,380	502,380
Single Family Housing	8,560.65	8,652.70	7750.61	28,902,544	28,902,544
Total	76,439.75	17,708.38	14,119.41	201,554,729	201,554,729

4.3 Trip Type Information

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,469.8707	9,469.8707	0.0000	0.0000	9,469.8707
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,469.8707	9,469.8707	0.0000	0.0000	9,469.8707
NaturalGas Mitigated	0.8024	7.0840	4.5836	0.0438		0.5544	0.5544		0.5544	0.5544	0.0000	7,940.9293	7,940.9293	0.1522	0.1456	7,988.1183
NaturalGas Unmitigated	0.8024	7.0840	4.5836	0.0438		0.5544	0.5544		0.5544	0.5544	0.0000	7,940.9293	7,940.9293	0.1522	0.1456	7,988.1183

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	6.84295e+006	0.0369	0.3153	0.1342	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	365.1657	365.1657	7.0000e-003	6.6900e-003	367.3357
Apartments Mid Rise	1.23984e+007	0.0669	0.5713	0.2431	3.6500e-003		0.0462	0.0462		0.0462	0.0462	0.0000	661.6246	661.6246	0.0127	0.0121	665.5563
Apartments Mid Rise	7.57059e+006	0.0408	0.3488	0.1484	2.2300e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.9956	403.9956	7.7400e-003	7.4100e-003	406.3964
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	6.54622e+007	0.3530	3.2089	2.6955	0.0193		0.2439	0.2439		0.2439	0.2439	0.0000	3,493.3144	3,493.3144	0.0670	0.0640	3,514.0734
General Office Building	1.1533e+007	0.0622	0.5654	0.4749	3.3900e-003		0.0430	0.0430		0.0430	0.0430	0.0000	615.4474	615.4474	0.0118	0.0113	619.1047
Office Park	174572	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	9.3158	9.3158	1.8000e-004	1.7000e-004	9.3712
Regional Shopping Center	65132.7	3.5000e-004	3.1900e-003	2.6800e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4757	3.4757	7.0000e-005	6.0000e-005	3.4964
Single Family Housing	4.39958e+007	0.2372	2.0273	0.8627	0.0129		0.1639	0.1639		0.1639	0.1639	0.0000	2,347.7812	2,347.7812	0.0450	0.0430	2,361.7329
Single Family Housing	764728	4.1200e-003	0.0352	0.0150	2.2000e-004		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	40.8088	40.8088	7.8000e-004	7.5000e-004	41.0513
Total		**0.8024**	**7.0840**	**4.5836**	**0.0438**		**0.5544**	**0.5544**		**0.5544**	**0.5544**	**0.0000**	**7,940.9293**	**7,940.9293**	**0.1522**	**0.1456**	**7,988.1182**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	6.84295e+006	0.0369	0.3153	0.1342	2.0100e-003		0.0255	0.0255		0.0255	0.0255	0.0000	365.1657	365.1657	7.0000e-003	6.6900e-003	367.3357
Apartments Mid Rise	1.23984e+007	0.0669	0.5713	0.2431	3.6500e-003		0.0462	0.0462		0.0462	0.0462	0.0000	661.6246	661.6246	0.0127	0.0121	665.5563
Apartments Mid Rise	7.57059e+006	0.0408	0.3488	0.1484	2.2300e-003		0.0282	0.0282		0.0282	0.0282	0.0000	403.9956	403.9956	7.7400e-003	7.4100e-003	406.3964
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	6.54622e+007	0.3530	3.2089	2.6955	0.0193		0.2439	0.2439		0.2439	0.2439	0.0000	3,493.3144	3,493.3144	0.0670	0.0640	3,514.0734
General Office Building	1.1533e+007	0.0622	0.5654	0.4749	3.3900e-003		0.0430	0.0430		0.0430	0.0430	0.0000	615.4474	615.4474	0.0118	0.0113	619.1047
Office Park	174572	9.4000e-004	8.5600e-003	7.1900e-003	5.0000e-005		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	9.3158	9.3158	1.8000e-004	1.7000e-004	9.3712
Regional Shopping Center	65132.7	3.5000e-004	3.1900e-003	2.6800e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	3.4757	3.4757	7.0000e-005	6.0000e-005	3.4964
Single Family Housing	4.39958e+007	0.2372	2.0273	0.8627	0.0129		0.1639	0.1639		0.1639	0.1639	0.0000	2,347.7812	2,347.7812	0.0450	0.0430	2,361.7329
Single Family Housing	764728	4.1200e-003	0.0352	0.0150	2.2000e-004		2.8500e-003	2.8500e-003		2.8500e-003	2.8500e-003	0.0000	40.8088	40.8088	7.8000e-004	7.5000e-004	41.0513
Total		**0.8024**	**7.0840**	**4.5836**	**0.0438**		**0.5544**	**0.5544**		**0.5544**	**0.5544**	**0.0000**	**7,940.9293**	**7,940.9293**	**0.1522**	**0.1456**	**7,988.1182**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.21547e+006	282.3828	0.0000	0.0000	282.3828
Apartments Mid Rise	2.60317e+006	331.7987	0.0000	0.0000	331.7987
Apartments Mid Rise	4.26322e+006	543.3876	0.0000	0.0000	543.3876
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	3.27869e+007	4,178.9979	0.0000	0.0000	4,178.9979
General Office Building	1.71913e+007	2,191.1875	0.0000	0.0000	2,191.1875
Office Park	229562	29.2598	0.0000	0.0000	29.2598
Regional Shopping Center	364285	46.4316	0.0000	0.0000	46.4316
Single Family Housing	1.43931e+007	1,834.5372	0.0000	0.0000	1,834.5372
Single Family Housing	250179	31.8877	0.0000	0.0000	31.8877
Total		**9,469.8707**	**0.0000**	**0.0000**	**9,469.8707**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.21547e+006	282.3828	0.0000	0.0000	282.3828
Apartments Mid Rise	2.60317e+006	331.7987	0.0000	0.0000	331.7987
Apartments Mid Rise	4.26322e+006	543.3876	0.0000	0.0000	543.3876
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	3.27869e+007	4,178.9979	0.0000	0.0000	4,178.9979
General Office Building	1.71913e+007	2,191.1875	0.0000	0.0000	2,191.1875
Office Park	229562	29.2598	0.0000	0.0000	29.2598
Regional Shopping Center	364285	46.4316	0.0000	0.0000	46.4316
Single Family Housing	1.43931e+007	1,834.5372	0.0000	0.0000	1,834.5372
Single Family Housing	250179	31.8877	0.0000	0.0000	31.8877
Total		**9,469.8707**	**0.0000**	**0.0000**	**9,469.8707**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	76.2415	2.5438	93.4514	0.1301		7.7647	7.7647		7.7647	7.7647	836.9000	1,679.4117	2,516.3117	2.5638	0.0568	2,597.3347
Unmitigated	76.2415	2.5438	93.4514	0.1301		7.7647	7.7647		7.7647	7.7647	836.9000	1,679.4117	2,516.3117	2.5638	0.0568	2,597.3347

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.3946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	45.7372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	25.8073	2.0435	50.0860	0.1278		7.5233	7.5233		7.5233	7.5233	836.9000	1,608.2344	2,445.1345	2.4958	0.0568	2,524.4567
Landscaping	1.3025	0.5003	43.3654	2.3000e-003		0.2414	0.2414		0.2414	0.2414	0.0000	71.1773	71.1773	0.0680	0.0000	72.8780
Total	**76.2415**	**2.5438**	**93.4514**	**0.1301**		**7.7647**	**7.7647**		**7.7647**	**7.7647**	**836.9000**	**1,679.4117**	**2,516.3117**	**2.5638**	**0.0568**	**2,597.3347**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	3.3946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	45.7372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	25.8073	2.0435	50.0860	0.1278		7.5233	7.5233		7.5233	7.5233	836.9000	1,608.2344	2,445.1345	2.4958	0.0568	2,524.4567
Landscaping	1.3025	0.5003	43.3654	2.3000e-003		0.2414	0.2414		0.2414	0.2414	0.0000	71.1773	71.1773	0.0680	0.0000	72.8780
Total	**76.2415**	**2.5438**	**93.4514**	**0.1301**		**7.7647**	**7.7647**		**7.7647**	**7.7647**	**836.9000**	**1,679.4117**	**2,516.3117**	**2.5638**	**0.0568**	**2,597.3347**

7.0 Water Detail

7.1 Mitigation Measures Water

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,495.5858	21.7664	0.5140	3,192.9024
Unmitigated	2,495.5858	21.7664	0.5140	3,192.9024

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.8999 / 22.6325	103.0199	1.1698	0.0276	140.4961
Apartments Mid Rise	116.691 / 73.566	334.8615	3.8024	0.0898	456.6759
City Park	0 / 98.893	140.0398	0.0000	0.0000	140.0398
Elementary School	161.687 / 415.766	908.3950	5.2686	0.1244	1,077.1810
General Office Building	226.499 / 138.822	644.3477	7.3805	0.1743	880.7912
Office Park	2.7531 / 1.68738	7.8321	0.0897	2.1200e-003	10.7060
Regional Shopping Center	2.42439 / 1.48592	6.8970	0.0790	1.8700e-003	9.4278
Single Family Housing	122.033 / 76.9342	350.1929	3.9765	0.0939	477.5846
Total		**2,495.5858**	**21.7664**	**0.5140**	**3,192.9024**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	35.8999 / 22.6325	103.0199	1.1698	0.0276	140.4961
Apartments Mid Rise	116.691 / 73.566	334.8615	3.8024	0.0898	456.6759
City Park	0 / 98.893	140.0398	0.0000	0.0000	140.0398
Elementary School	161.687 / 415.766	908.3950	5.2686	0.1244	1,077.1810
General Office Building	226.499 / 138.822	644.3477	7.3805	0.1743	880.7912
Office Park	2.7531 / 1.68738	7.8321	0.0897	2.1200e-003	10.7060
Regional Shopping Center	2.42439 / 1.48592	6.8970	0.0790	1.8700e-003	9.4278
Single Family Housing	122.033 / 76.9342	350.1929	3.9765	0.0939	477.5846
Total		**2,495.5858**	**21.7664**	**0.5140**	**3,192.9024**

8.0 Waste Detail

8.1 Mitigation Measures Waste

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2,387.8984	141.1208	0.0000	5,915.9172
Unmitigated	2,387.8984	141.1208	0.0000	5,915.9172

RHE GPU Low-build - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	823.86	167.2361	9.8834	0.0000	414.3205
City Park	7.14	1.4494	0.0857	0.0000	3.5907
Elementary School	7248.8	1,471.4409	86.9597	0.0000	3,645.4325
General Office Building	1185.16	240.5768	14.2177	0.0000	596.0188
Office Park	14.41	2.9251	0.1729	0.0000	7.2468
Regional Shopping Center	34.37	6.9768	0.4123	0.0000	17.2847
Single Family Housing	2196.37	445.8433	26.3486	0.0000	1,104.5578
Total		**2,387.8984**	**141.1208**	**0.0000**	**5,915.9172**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	823.86	167.2361	9.8834	0.0000	414.3205
City Park	7.14	1.4494	0.0857	0.0000	3.5907
Elementary School	7248.8	1,471.4409	86.9597	0.0000	3,645.4325
General Office Building	1185.16	240.5768	14.2177	0.0000	596.0188
Office Park	14.41	2.9251	0.1729	0.0000	7.2468
Regional Shopping Center	34.37	6.9768	0.4123	0.0000	17.2847
Single Family Housing	2196.37	445.8433	26.3486	0.0000	1,104.5578
Total		**2,387.8984**	**141.1208**	**0.0000**	**5,915.9172**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Low-build

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,274.37	1000sqft	93.00	1,274,370.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	1,112.00	Dwelling Unit	0.00	1,112,000.00	3180
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	1,841.00	Dwelling Unit	874.00	3,313,800.00	5265
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=201,545,750

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LotAcreage	29.26	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	29.26	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	597.73	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.03
tblVehicleTrips	ST_TR	4.91	2.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	1.96	0.97
tblVehicleTrips	ST_TR	2.21	1.10
tblVehicleTrips	ST_TR	1.64	0.81
tblVehicleTrips	ST_TR	46.12	22.86
tblVehicleTrips	ST_TR	9.54	4.70
tblVehicleTrips	SU_TR	6.28	3.11
tblVehicleTrips	SU_TR	4.09	2.03
tblVehicleTrips	SU_TR	2.19	1.09
tblVehicleTrips	SU_TR	0.70	0.35
tblVehicleTrips	SU_TR	0.76	0.38
tblVehicleTrips	SU_TR	21.10	10.46
tblVehicleTrips	SU_TR	8.55	4.21
tblVehicleTrips	WD_TR	7.32	3.63
tblVehicleTrips	WD_TR	5.44	2.75
tblVehicleTrips	WD_TR	0.78	0.39
tblVehicleTrips	WD_TR	19.52	9.67
tblVehicleTrips	WD_TR	9.74	4.83
tblVehicleTrips	WD_TR	11.07	5.49
tblVehicleTrips	WD_TR	37.75	18.71
tblVehicleTrips	WD_TR	9.44	4.65

2.0 Emissions Summary

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Energy	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
Mobile	185.1441	159.0095	1,826.8131	4.0416	552.6825	2.0015	554.6840	147.2853	1.8664	149.1517		451,141.6616	451,141.6616	28.7113	16.9696	456,916.3741
Total	**2,533.7573**	**365.3044**	**6,205.7324**	**14.5217**	**552.6825**	**608.8337**	**1,161.5162**	**147.2853**	**608.6986**	**755.9839**	**73,801.9501**	**641,555.0425**	**715,356.9925**	**250.3222**	**22.8581**	**728,426.7470**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Energy	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
Mobile	185.1441	159.0095	1,826.8131	4.0416	552.6825	2.0015	554.6840	147.2853	1.8664	149.1517		451,141.6616	451,141.6616	28.7113	16.9696	456,916.3741
Total	**2,533.7573**	**365.3044**	**6,205.7324**	**14.5217**	**552.6825**	**608.8337**	**1,161.5162**	**147.2853**	**608.6986**	**755.9839**	**73,801.9501**	**641,555.0425**	**715,356.9925**	**250.3222**	**22.8581**	**728,426.7470**

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	185.1441	159.0095	1,826.8131	4.0416	552.6825	2.0015	554.6840	147.2853	1.8664	149.1517		451,141.6616	451,141.6616	28.7113	16.9696	456,916.3741
Unmitigated	185.1441	159.0095	1,826.8131	4.0416	552.6825	2.0015	554.6840	147.2853	1.8664	149.1517		451,141.6616	451,141.6616	28.7113	16.9696	456,916.3741

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,000.13	2,220.53	1713.61	6,802,471	6,802,471
Apartments Mid Rise	1,867.25	1,683.92	1378.37	6,052,528	6,052,528
Apartments Mid Rise	3,058.00	2,757.76	2257.36	9,912,240	9,912,240
City Park	32.37	80.51	90.47	136,819	136,819
Elementary School	53,919.92	0.00	0.00	132,734,815	132,734,815
General Office Building	6,155.21	1,401.81	446.03	15,013,790	15,013,790
Office Park	85.04	12.55	5.89	214,126	214,126
Regional Shopping Center	612.38	748.21	342.36	1,283,016	1,283,016
Single Family Housing	148.80	150.40	134.72	502,380	502,380
Single Family Housing	8,560.65	8,652.70	7750.61	28,902,544	28,902,544
Total	76,439.75	17,708.38	14,119.41	201,554,729	201,554,729

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
NaturalGas Unmitigated	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	18747.8	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20741.3	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	33968.2	0.3663	3.1304	1.3321	0.0200		0.2531	0.2531		0.2531	0.2531		3,996.2538	3,996.2538	0.0766	0.0733	4,020.0016
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	31597.4	0.3408	3.0978	2.6021	0.0186		0.2354	0.2354		0.2354	0.2354		3,717.3404	3,717.3404	0.0713	0.0682	3,739.4307
Office Park	478.28	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	178.446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	120536	1.2999	11.1083	4.7269	0.0709		0.8981	0.8981		0.8981	0.8981		14,180.7438	14,180.7438	0.2718	0.2600	14,265.0129
Single Family Housing	2095.15	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.3967**	**38.8163**	**25.1159**	**0.2398**		**3.0377**	**3.0377**		**3.0377**	**3.0377**		**47,963.7050**	**47,963.7050**	**0.9193**	**0.8793**	**48,248.7293**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	18.7478	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20.7413	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	33.9682	0.3663	3.1304	1.3321	0.0200		0.2531	0.2531		0.2531	0.2531		3,996.2538	3,996.2538	0.0766	0.0733	4,020.0016
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179.349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	31.5974	0.3408	3.0978	2.6021	0.0186		0.2354	0.2354		0.2354	0.2354		3,717.3404	3,717.3404	0.0713	0.0682	3,739.4307
Office Park	0.47828	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	0.178446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	120.536	1.2999	11.1083	4.7269	0.0709		0.8981	0.8981		0.8981	0.8981		14,180.7438	14,180.7438	0.2718	0.2600	14,265.0129
Single Family Housing	2.09515	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.3967**	**38.8163**	**25.1159**	**0.2398**		**3.0377**	**3.0377**		**3.0377**	**3.0377**		**47,963.7050**	**47,963.7050**	**0.9193**	**0.8793**	**48,248.7293**

6.0 Area Detail

6.1 Mitigation Measures Area

RHE GPU Low-build - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Unmitigated	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.6005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	250.6145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,064.5816	163.4760	4,006.8800	10.2219		601.8636	601.8636		601.8636	601.8636	73,801.9501	141,822.0000	215,623.9501	220.0917	5.0092	222,618.9695
Landscaping	10.4198	4.0026	346.9235	0.0184		1.9309	1.9309		1.9309	1.9309		627.6759	627.6759	0.5999		642.6741
Total	**2,344.2165**	**167.4786**	**4,353.8034**	**10.2403**		**603.7945**	**603.7945**		**603.7945**	**603.7945**	**73,801.9501**	**142,449.6759**	**216,251.6260**	**220.6916**	**5.0092**	**223,261.6435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.6005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	250.6145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,064.5816	163.4760	4,006.8800	10.2219		601.8636	601.8636		601.8636	601.8636	73,801.9501	141,822.0000	215,623.9501	220.0917	5.0092	222,618.9695
Landscaping	10.4198	4.0026	346.9235	0.0184		1.9309	1.9309		1.9309	1.9309		627.6759	627.6759	0.5999		642.6741
Total	**2,344.2165**	**167.4786**	**4,353.8034**	**10.2403**		**603.7945**	**603.7945**		**603.7945**	**603.7945**	**73,801.9501**	**142,449.6759**	**216,251.6260**	**220.6916**	**5.0092**	**223,261.6435**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

RHE GPU Low-build

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	1,274.37	1000sqft	93.00	1,274,370.00	0
Office Park	15.49	1000sqft	2.00	15,490.00	0
Elementary School	5,576.00	1000sqft	128.01	5,576,000.00	0
City Park	83.00	Acre	307.00	3,615,480.00	0
Apartments Low Rise	551.00	Dwelling Unit	166.00	551,000.00	1576
Apartments Mid Rise	679.00	Dwelling Unit	102.00	679,000.00	1942
Apartments Mid Rise	1,112.00	Dwelling Unit	0.00	1,112,000.00	3180
Single Family Housing	32.00	Dwelling Unit	39.00	57,600.00	92
Single Family Housing	1,841.00	Dwelling Unit	874.00	3,313,800.00	5265
Regional Shopping Center	32.73	1000sqft	6.00	32,730.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2040
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Per land use spreadsheet

Construction Phase - no construction phase

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - on construction phase

Grading - no construction phase

Vehicle Trips - VMT=201,545,750

Area Coating - RULE 1113

Area Mitigation - RULE 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	6,000.00	0.00
tblLandUse	LotAcreage	29.26	93.00
tblLandUse	LotAcreage	0.36	2.00
tblLandUse	LotAcreage	83.00	307.00
tblLandUse	LotAcreage	34.44	166.00
tblLandUse	LotAcreage	17.87	102.00
tblLandUse	LotAcreage	29.26	0.00
tblLandUse	LotAcreage	10.39	39.00
tblLandUse	LotAcreage	597.73	874.00
tblLandUse	LotAcreage	0.75	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0
tblVehicleTrips	ST_TR	8.14	4.03
tblVehicleTrips	ST_TR	4.91	2.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	1.96	0.97
tblVehicleTrips	ST_TR	2.21	1.10
tblVehicleTrips	ST_TR	1.64	0.81
tblVehicleTrips	ST_TR	46.12	22.86
tblVehicleTrips	ST_TR	9.54	4.70
tblVehicleTrips	SU_TR	6.28	3.11
tblVehicleTrips	SU_TR	4.09	2.03
tblVehicleTrips	SU_TR	2.19	1.09
tblVehicleTrips	SU_TR	0.70	0.35
tblVehicleTrips	SU_TR	0.76	0.38
tblVehicleTrips	SU_TR	21.10	10.46
tblVehicleTrips	SU_TR	8.55	4.21
tblVehicleTrips	WD_TR	7.32	3.63
tblVehicleTrips	WD_TR	5.44	2.75
tblVehicleTrips	WD_TR	0.78	0.39
tblVehicleTrips	WD_TR	19.52	9.67
tblVehicleTrips	WD_TR	9.74	4.83
tblVehicleTrips	WD_TR	11.07	5.49
tblVehicleTrips	WD_TR	37.75	18.71
tblVehicleTrips	WD_TR	9.44	4.65

2.0 Emissions Summary

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Energy	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
Mobile	182.2383	171.5932	1,813.3850	3.8758	552.6825	2.0023	554.6848	147.2853	1.8671	149.1524		432,514.3239	432,514.3239	29.3576	17.6540	438,509.1623
Total	**2,530.8515**	**377.8881**	**6,192.3043**	**14.3559**	**552.6825**	**608.8345**	**1,161.5170**	**147.2853**	**608.6993**	**755.9846**	**73,801.9501**	**622,927.7048**	**696,729.6549**	**250.9685**	**23.5425**	**710,019.5352**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Energy	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
Mobile	182.2383	171.5932	1,813.3850	3.8758	552.6825	2.0023	554.6848	147.2853	1.8671	149.1524		432,514.3239	432,514.3239	29.3576	17.6540	438,509.1623
Total	**2,530.8515**	**377.8881**	**6,192.3043**	**14.3559**	**552.6825**	**608.8345**	**1,161.5170**	**147.2853**	**608.6993**	**755.9846**	**73,801.9501**	**622,927.7048**	**696,729.6549**	**250.9685**	**23.5425**	**710,019.5352**

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/29/2021	6/28/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	0.00	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
Site Preparation	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
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	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

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

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2021

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	182.2383	171.5932	1,813.3850	3.8758	552.6825	2.0023	554.6848	147.2853	1.8671	149.1524		432,514.3239	432,514.3239	29.3576	17.6540	438,509.1623
Unmitigated	182.2383	171.5932	1,813.3850	3.8758	552.6825	2.0023	554.6848	147.2853	1.8671	149.1524		432,514.3239	432,514.3239	29.3576	17.6540	438,509.1623

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,000.13	2,220.53	1713.61	6,802,471	6,802,471
Apartments Mid Rise	1,867.25	1,683.92	1378.37	6,052,528	6,052,528
Apartments Mid Rise	3,058.00	2,757.76	2257.36	9,912,240	9,912,240
City Park	32.37	80.51	90.47	136,819	136,819
Elementary School	53,919.92	0.00	0.00	132,734,815	132,734,815
General Office Building	6,155.21	1,401.81	446.03	15,013,790	15,013,790
Office Park	85.04	12.55	5.89	214,126	214,126
Regional Shopping Center	612.38	748.21	342.36	1,283,016	1,283,016
Single Family Housing	148.80	150.40	134.72	502,380	502,380
Single Family Housing	8,560.65	8,652.70	7750.61	28,902,544	28,902,544
Total	76,439.75	17,708.38	14,119.41	201,554,729	201,554,729

4.3 Trip Type Information

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Elementary School	16.60	8.40	6.90	65.00	30.00	5.00	63	25	12
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Apartments Mid Rise	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
City Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Elementary School	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
General Office Building	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Office Park	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Regional Shopping Center	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457
Single Family Housing	0.516633	0.070991	0.195744	0.128836	0.026081	0.007842	0.011970	0.007437	0.000933	0.000540	0.028760	0.000776	0.003457

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293
NaturalGas Unmitigated	4.3967	38.8163	25.1159	0.2398		3.0377	3.0377		3.0377	3.0377		47,963.7050	47,963.7050	0.9193	0.8793	48,248.7293

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Low Rise	18747.8	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20741.3	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	33968.2	0.3663	3.1304	1.3321	0.0200		0.2531	0.2531		0.2531	0.2531		3,996.2538	3,996.2538	0.0766	0.0733	4,020.0016
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	31597.4	0.3408	3.0978	2.6021	0.0186		0.2354	0.2354		0.2354	0.2354		3,717.3404	3,717.3404	0.0713	0.0682	3,739.4307
Office Park	478.28	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	178.446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	120536	1.2999	11.1083	4.7269	0.0709		0.8981	0.8981		0.8981	0.8981		14,180.7438	14,180.7438	0.2718	0.2600	14,265.0129
Single Family Housing	2095.15	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.3967**	**38.8163**	**25.1159**	**0.2398**		**3.0377**	**3.0377**		**3.0377**	**3.0377**		**47,963.7050**	**47,963.7050**	**0.9193**	**0.8793**	**48,248.7293**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	18.7478	0.2022	1.7277	0.7352	0.0110		0.1397	0.1397		0.1397	0.1397		2,205.6233	2,205.6233	0.0423	0.0404	2,218.7302
Apartments Mid Rise	20.7413	0.2237	1.9115	0.8134	0.0122		0.1545	0.1545		0.1545	0.1545		2,440.1586	2,440.1586	0.0468	0.0447	2,454.6592
Apartments Mid Rise	33.9682	0.3663	3.1304	1.3321	0.0200		0.2531	0.2531		0.2531	0.2531		3,996.2538	3,996.2538	0.0766	0.0733	4,020.0016
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	179.349	1.9342	17.5832	14.7699	0.1055		1.3363	1.3363		1.3363	1.3363		21,099.8356	21,099.8356	0.4044	0.3868	21,225.2214
General Office Building	31.5974	0.3408	3.0978	2.6021	0.0186		0.2354	0.2354		0.2354	0.2354		3,717.3404	3,717.3404	0.0713	0.0682	3,739.4307
Office Park	0.47828	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003		56.2683	56.2683	1.0800e-003	1.0300e-003	56.6026
Regional Shopping Center	0.178446	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		20.9936	20.9936	4.0000e-004	3.8000e-004	21.1184
Single Family Housing	120.536	1.2999	11.1083	4.7269	0.0709		0.8981	0.8981		0.8981	0.8981		14,180.7438	14,180.7438	0.2718	0.2600	14,265.0129
Single Family Housing	2.09515	0.0226	0.1931	0.0822	1.2300e-003		0.0156	0.0156		0.0156	0.0156		246.4877	246.4877	4.7200e-003	4.5200e-003	247.9524
Total		**4.3967**	**38.8163**	**25.1159**	**0.2398**		**3.0377**	**3.0377**		**3.0377**	**3.0377**		**47,963.7050**	**47,963.7050**	**0.9193**	**0.8793**	**48,248.7293**

6.0 Area Detail

6.1 Mitigation Measures Area

RHE GPU Low-build - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435
Unmitigated	2,344.2165	167.4786	4,353.8034	10.2403		603.7945	603.7945		603.7945	603.7945	73,801.9501	142,449.6759	216,251.6260	220.6916	5.0092	223,261.6435

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.6005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	250.6145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,064.5816	163.4760	4,006.8800	10.2219		601.8636	601.8636		601.8636	601.8636	73,801.9501	141,822.0000	215,623.9501	220.0917	5.0092	222,618.9695
Landscaping	10.4198	4.0026	346.9235	0.0184		1.9309	1.9309		1.9309	1.9309		627.6759	627.6759	0.5999		642.6741
Total	**2,344.2165**	**167.4786**	**4,353.8034**	**10.2403**		**603.7945**	**603.7945**		**603.7945**	**603.7945**	**73,801.9501**	**142,449.6759**	**216,251.6260**	**220.6916**	**5.0092**	**223,261.6435**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	18.6005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	250.6145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2,064.5816	163.4760	4,006.8800	10.2219		601.8636	601.8636		601.8636	601.8636	73,801.9501	141,822.0000	215,623.9501	220.0917	5.0092	222,618.9695
Landscaping	10.4198	4.0026	346.9235	0.0184		1.9309	1.9309		1.9309	1.9309		627.6759	627.6759	0.5999		642.6741
Total	**2,344.2165**	**167.4786**	**4,353.8034**	**10.2403**		**603.7945**	**603.7945**		**603.7945**	**603.7945**	**73,801.9501**	**142,449.6759**	**216,251.6260**	**220.6916**	**5.0092**	**223,261.6435**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

Rolling Hills Estates General Plan Update
Energy Calculations

Land Use	Natural Gas Use		Electricity Use	
	(kBTU/yr)	(Therms)	(kWh/yr)	(MWh/yr)
Low-build				
Apartments Low Rise	6,842,950	68,430	2,215,470	2,215
Apartments Mid Rise	12,398,400	123,984	2,603,170	2,603
Apartments Mid Rise	7,570,590	75,706	4,263,220	4,263
City Park	-	-	-	-
Elementary School	65,462,200	654,622	32,786,900	32,787
General Office Building	11,533,000	115,330	17,191,300	17,191
Office Park	174,572	1,746	229,562	230
Regional Shopping Center	65,133	651	364,285	364
Single Family Housing	43,995,800	439,958	14,393,100	14,393
Single Family Housing	764,728	7,647	250,179	250
High-build				
Apartments Low Rise	6,842,950	68,430	2,215,470	2,215
Apartments Mid Rise	23,325,000	233,250	2,603,170	2,603
Apartments Mid Rise	7,570,590	75,706	8,020,370	8,020
City Park	-	-	-	-
Elementary School	65,462,200	654,622	32,786,900	32,787
General Office Building	12,333,400	123,334	18,384,300	18,384
Office Park	174,572	1,746	229,562	230
Regional Shopping Center	65,133	651	364,285	364
Single Family Housing	51,165,100	511,651	16,738,500	16,739
Single Family Housing	764,728	7,647	250,179	250
Existing				
Apartments Mid Rise	*2,586,710*	*25,867*	*889,449*	*889*
Arena	*3,436,360*	*34,364*	*1,368,920*	*1,369*
City Park	-	-	-	-
Condo/Townhouse	*11,207,200*	*112,072*	*14,497*	*14*
Elementary School	*49,516*	*495*	*3,821,150*	*3,821*
General Office Building	*3,860,040*	*38,600*	*5,753,810*	*5,754*
General Office Building	*4,566,010*	*45,660*	*6,806,120*	*6,806*
Golf Course	-	-	-	-
Government Office Building	*869,108*	*8,691*	*1,295,500*	*1,296*
Hospital	*1,427,780*	*14,278*	*361,134*	*361*
Office Park	*3,674,620*	*36,746*	*4,832,110*	*4,832*
Place of Worship	*264,026*	*2,640*	*105,178*	*105*
Single Family Housing	*57,904,200*	*579,042*	*18,943,200*	*18,943*

Rolling Hills Estates General Plan Update
Energy Calculations

Difference (Low_build)	**58,961,802**	**589,618**	**30,106,118**	**30,106**
Difference (High_build)	**77,858,102**	**778,581**	**37,401,668**	**37,402**

1 kBTU = 0.01 therms

Energy Type	Project Annual Energy Consumption	Los Angeles County Annual Energy Consumption (2019)	Percentage increase countywide
Low-build Electricity (MWh/YR)	30,106	66,118,673	0.0455%
High-build Electricity (MWh/YR)	37,402	66,118,674	0.0566%
Low-build Natural Gas (Therms)	589,618	3,048,320,959	0.0193%
High-build Natural Gas (Therms)	778,581	3,048,320,960	0.0255%

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

RHE General Plan Update
Energy Calculations

Vehicle Type	Percent of Vehicle Trips[1]	Daily Trips[2]	Annual Vehicle Miles Traveled[3]	Average Fuel Economy (miles per gallon)[4]	Total Annual Fuel Consumption (gallons)[5]
Low_build					
Passenger Cars	0.52	39,491	104,129,824	22	4,733,174
Light/Medium Trucks	0.44	33,745	88,979,157	17.3	5,143,304
Heavy Trucks/Other	0.04	3,203	8,445,748	6.4	1,319,648
TOTAL [6]	***1.00***	76,440	***201,554,729***	*--*	***11,196,126***
High Build					
Passenger Cars	0.52	42,797	114,202,628	22	5,191,029
Light/Medium Trucks	0.44	36,570	97,586,389	17.3	5,640,832
Heavy Trucks/Other	0.04	3,471	9,262,731	6.4	1,447,302
TOTAL [6]	***1.00***	82,839	***221,051,748***	*--*	***12,279,162***
Existing					
Passenger Cars	0.55	39,943	105,758,535	22	4,807,206
Light/Medium Trucks	0.41	30,137	79,794,303	17.3	4,612,387
Heavy Trucks/Other	0.04	2,701	7,151,264	6.4	1,117,385
TOTAL [6]	***1.00***	72,781	***192,704,487***	*--*	***10,536,979***
				Low-build NET PROJECT	***659,147***
				High-build NET PROJECT	***1,742,184***

Notes:

1. Percent of Vehicle Trip distribution based on trip characteristics in the Traffic Impact Study and within the CalEEMod model.

2. Daily Trips calculated by multiplying the total daily trips by percent vehicle trips (i.e., Daily Trips x percent of Vehicle Trips).

3. Daily Vehicle Miles Traveled (VMT) calculated by multiplying percent vehicle trips by total VMT (i.e., VMT x percent of Vehicle Trips).

4. Average fuel economy derived from the Department of Transportation.

5. Total Daily Fuel Consumption calculated by dividing the daily VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).

6. Values may be slightly off due to rounding.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

Appendix A

Small Scale Representative Project Emissions Data

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase - more time (change from 2days to 5 days) to grade to decrease daily NOX

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	5.00
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	51.2136	82.5269	22.3005	0.2656	12.8272	1.0223	13.8495	4.5834	0.9590	5.5424	0.0000	28,914.1686	28,914.1686	1.8999	4.3608	30,261.1960
Maximum	**51.2136**	**82.5269**	**22.3005**	**0.2656**	**12.8272**	**1.0223**	**13.8495**	**4.5834**	**0.9590**	**5.5424**	**0.0000**	**28,914.1686**	**28,914.1686**	**1.8999**	**4.3608**	**30,261.1960**

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					
2022	51.2136	82.5269	22.3005	0.2656	9.2537	1.0223	10.2759	2.9317	0.9590	3.8907	0.0000	28,914.1686	28,914.1686	1.8999	4.3608	30,261.1960
Maximum	**51.2136**	**82.5269**	**22.3005**	**0.2656**	**9.2537**	**1.0223**	**10.2759**	**2.9317**	**0.9590**	**3.8907**	**0.0000**	**28,914.1686**	**28,914.1686**	**1.8999**	**4.3608**	**30,261.1960**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.86**	**0.00**	**25.80**	**36.04**	**0.00**	**29.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Total	**12.2598**	**3.1563**	**38.3652**	**0.0810**	**3.4158**	**2.7497**	**6.1655**	**0.9098**	**2.7479**	**3.6577**	**327.8421**	**4,551.1801**	**4,879.0222**	**1.2766**	**0.2024**	**4,971.2480**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Total	**3.1497**	**2.9527**	**20.7882**	**0.0390**	**3.4158**	**0.1184**	**3.5342**	**0.9098**	**0.1165**	**1.0264**	**0.0000**	**4,588.2389**	**4,588.2389**	**0.3117**	**0.1924**	**4,653.3555**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	74.31	6.45	45.81	51.93	0.00	95.69	42.68	0.00	95.76	71.94	100.00	-0.81	5.96	75.59	4.95	6.39

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/24/2022	5	5	
4	Building Construction	Building Construction	1/25/2022	6/13/2022	5	100	
5	Paving	Paving	6/14/2022	6/20/2022	5	5	
6	Architectural Coating	Architectural Coating	6/21/2022	6/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					10.7196	0.0000	10.7196	1.6231	0.0000	1.6231			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**10.7196**	**0.3375**	**11.0571**	**1.6231**	**0.3225**	**1.9456**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2251	8.6508	1.9725	0.0308	0.8664	0.0619	0.9283	0.2376	0.0592	0.2968		3,370.8271	3,370.8271	0.1787	0.5348	3,534.6774
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.2621**	**8.6788**	**2.3344**	**0.0317**	**0.9782**	**0.0626**	**1.0408**	**0.2672**	**0.0599**	**0.3271**		**3,469.3404**	**3,469.3404**	**0.1815**	**0.5375**	**3,634.0588**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.9716	0.0000	3.9716	0.6013	0.0000	0.6013			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**3.9716**	**0.3375**	**4.3091**	**0.6013**	**0.3225**	**0.9239**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2251	8.6508	1.9725	0.0308	0.8664	0.0619	0.9283	0.2376	0.0592	0.2968		3,370.8271	3,370.8271	0.1787	0.5348	3,534.6774
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.2621**	**8.6788**	**2.3344**	**0.0317**	**0.9782**	**0.0626**	**1.0408**	**0.2672**	**0.0599**	**0.3271**		**3,469.3404**	**3,469.3404**	**0.1815**	**0.5375**	**3,634.0588**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.1965	0.0000	0.1965	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.1965**	**0.2573**	**0.4538**	**0.0212**	**0.2367**	**0.2580**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					5.6768	0.0000	5.6768	2.6238	0.0000	2.6238			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.6768**	**0.5173**	**6.1941**	**2.6238**	**0.4759**	**3.0997**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	1.8343	70.5000	16.0750	0.2508	7.0610	0.5044	7.5654	1.9359	0.4826	2.4185		27,470.5381	27,470.5381	1.4562	4.3587	28,805.8359
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**1.8639**	**70.5223**	**16.3645**	**0.2515**	**7.1504**	**0.5050**	**7.6554**	**1.9596**	**0.4831**	**2.4427**		**27,549.3488**	**27,549.3488**	**1.4585**	**4.3608**	**28,885.3410**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					2.1033	0.0000	2.1033	0.9721	0.0000	0.9721			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.1033**	**0.5173**	**2.6206**	**0.9721**	**0.4759**	**1.4480**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	1.8343	70.5000	16.0750	0.2508	7.0610	0.5044	7.5654	1.9359	0.4826	2.4185		27,470.5381	27,470.5381	1.4562	4.3587	28,805.8359
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**1.8639**	**70.5223**	**16.3645**	**0.2515**	**7.1504**	**0.5050**	**7.6554**	**1.9596**	**0.4831**	**2.4427**		**27,549.3488**	**27,549.3488**	**1.4585**	**4.3608**	**28,885.3410**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0369	0.9691	0.3301	3.7200e-003	0.1217	8.9000e-003	0.1306	0.0350	8.5100e-003	0.0436		400.0273	400.0273	0.0133	0.0577	417.5541
Worker	0.2408	0.1815	2.3522	6.2900e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		640.3366	640.3366	0.0185	0.0174	645.9787
Total	**0.2778**	**1.1506**	**2.6823**	**0.0100**	**0.8483**	**0.0136**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,040.3638**	**1,040.3638**	**0.0318**	**0.0751**	**1,063.5328**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0369	0.9691	0.3301	3.7200e-003	0.1217	8.9000e-003	0.1306	0.0350	8.5100e-003	0.0436		400.0273	400.0273	0.0133	0.0577	417.5541
Worker	0.2408	0.1815	2.3522	6.2900e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		640.3366	640.3366	0.0185	0.0174	645.9787
Total	**0.2778**	**1.1506**	**2.6823**	**0.0100**	**0.8483**	**0.0136**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,040.3638**	**1,040.3638**	**0.0318**	**0.0751**	**1,063.5328**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0667	0.0503	0.6514	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		177.3240	177.3240	5.1300e-003	4.8100e-003	178.8864
Total	**0.0667**	**0.0503**	**0.6514**	**1.7400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**177.3240**	**177.3240**	**5.1300e-003**	**4.8100e-003**	**178.8864**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0667	0.0503	0.6514	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		177.3240	177.3240	5.1300e-003	4.8100e-003	178.8864
Total	**0.0667**	**0.0503**	**0.6514**	**1.7400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**177.3240**	**177.3240**	**5.1300e-003**	**4.8100e-003**	**178.8864**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.0482**	**0.0363**	**0.4704**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**128.0673**	**128.0673**	**3.7000e-003**	**3.4800e-003**	**129.1958**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.0482**	**0.0363**	**0.4704**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**128.0673**	**128.0673**	**3.7000e-003**	**3.4800e-003**	**129.1958**

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Unmitigated	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
NaturalGas Unmitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1069.14	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.06914	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Small Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Unmitigated	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1713	0.7262	17.7993	0.0454		2.6736	2.6736		2.6736	2.6736	327.8421	630.0000	957.8421	0.9777	0.0223	988.9153
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**10.1544**	**0.7597**	**20.7112**	**0.0456**		**2.6897**	**2.6897**		**2.6897**	**2.6897**	**327.8421**	**635.2501**	**963.0922**	**0.9828**	**0.0223**	**994.2938**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0612	0.5225	0.2224	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	667.0588	667.0588	0.0128	0.0122	671.0228
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**1.0443**	**0.5560**	**3.1342**	**3.4900e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**672.3089**	**672.3089**	**0.0179**	**0.0122**	**676.4013**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase - more time (change from 2days to 5 days) to grade to decrease daily NOX

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	5.00
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	51.2104	79.7754	22.0482	0.2656	12.8272	1.0212	13.8484	4.5834	0.9580	5.5414	0.0000	28,910.5175	28,910.5175	1.9023	4.3593	30,257.1404
Maximum	**51.2104**	**79.7754**	**22.0482**	**0.2656**	**12.8272**	**1.0212**	**13.8484**	**4.5834**	**0.9580**	**5.5414**	**0.0000**	**28,910.5175**	**28,910.5175**	**1.9023**	**4.3593**	**30,257.1404**

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					
2022	51.2104	79.7754	22.0482	0.2656	9.2537	1.0212	10.2749	2.9317	0.9580	3.8897	0.0000	28,910.5175	28,910.5175	1.9023	4.3593	30,257.1404
Maximum	**51.2104**	**79.7754**	**22.0482**	**0.2656**	**9.2537**	**1.0212**	**10.2749**	**2.9317**	**0.9580**	**3.8897**	**0.0000**	**28,910.5175**	**28,910.5175**	**1.9023**	**4.3593**	**30,257.1404**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.86**	**0.00**	**25.80**	**36.04**	**0.00**	**29.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Total	**12.3142**	**3.0102**	**38.3583**	**0.0825**	**3.4158**	**2.7497**	**6.1655**	**0.9098**	**2.7479**	**3.6577**	**327.8421**	**4,698.0332**	**5,025.8753**	**1.2638**	**0.1947**	**5,115.4756**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Total	**3.2040**	**2.8065**	**20.7813**	**0.0404**	**3.4158**	**0.1184**	**3.5342**	**0.9098**	**0.1165**	**1.0263**	**0.0000**	**4,735.0920**	**4,735.0920**	**0.2989**	**0.1846**	**4,797.5831**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	73.98	6.77	45.82	51.02	0.00	95.70	42.68	0.00	95.76	71.94	100.00	-0.79	5.79	76.35	5.15	6.21

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/24/2022	5	5	
4	Building Construction	Building Construction	1/25/2022	6/13/2022	5	100	
5	Paving	Paving	6/14/2022	6/20/2022	5	5	
6	Architectural Coating	Architectural Coating	6/21/2022	6/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					10.7196	0.0000	10.7196	1.6231	0.0000	1.6231			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**10.7196**	**0.3375**	**11.0571**	**1.6231**	**0.3225**	**1.9456**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2306	8.3135	1.9384	0.0308	0.8664	0.0618	0.9282	0.2376	0.0591	0.2966		3,369.8392	3,369.8392	0.1790	0.5347	3,533.6450
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.2652**	**8.3387**	**2.3325**	**0.0318**	**0.9782**	**0.0625**	**1.0407**	**0.2672**	**0.0598**	**0.3269**		**3,473.8519**	**3,473.8519**	**0.1818**	**0.5372**	**3,638.4738**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.9716	0.0000	3.9716	0.6013	0.0000	0.6013			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**3.9716**	**0.3375**	**4.3091**	**0.6013**	**0.3225**	**0.9239**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2306	8.3135	1.9384	0.0308	0.8664	0.0618	0.9282	0.2376	0.0591	0.2966		3,369.8392	3,369.8392	0.1790	0.5347	3,533.6450
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.2652**	**8.3387**	**2.3325**	**0.0318**	**0.9782**	**0.0625**	**1.0407**	**0.2672**	**0.0598**	**0.3269**		**3,473.8519**	**3,473.8519**	**0.1818**	**0.5372**	**3,638.4738**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.1965	0.0000	0.1965	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.1965**	**0.2573**	**0.4538**	**0.0212**	**0.2367**	**0.2580**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					5.6768	0.0000	5.6768	2.6238	0.0000	2.6238			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.6768**	**0.5173**	**6.1941**	**2.6238**	**0.4759**	**3.0997**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	1.8794	67.7506	15.7969	0.2507	7.0610	0.5034	7.5643	1.9359	0.4816	2.4175		27,462.4875	27,462.4875	1.4587	4.3573	28,797.4223
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**1.9071**	**67.7708**	**16.1122**	**0.2515**	**7.1504**	**0.5039**	**7.6543**	**1.9596**	**0.4821**	**2.4417**		**27,545.6977**	**27,545.6977**	**1.4609**	**4.3593**	**28,881.2853**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					2.1033	0.0000	2.1033	0.9721	0.0000	0.9721			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.1033**	**0.5173**	**2.6206**	**0.9721**	**0.4759**	**1.4480**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	1.8794	67.7506	15.7969	0.2507	7.0610	0.5034	7.5643	1.9359	0.4816	2.4175		27,462.4875	27,462.4875	1.4587	4.3573	28,797.4223
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**1.9071**	**67.7708**	**16.1122**	**0.2515**	**7.1504**	**0.5039**	**7.6543**	**1.9596**	**0.4821**	**2.4417**		**27,545.6977**	**27,545.6977**	**1.4609**	**4.3593**	**28,881.2853**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0374	0.9307	0.3191	3.7200e-003	0.1217	8.8700e-003	0.1306	0.0350	8.4800e-003	0.0435		399.8770	399.8770	0.0134	0.0576	417.3828
Worker	0.2250	0.1642	2.5619	6.6500e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		676.0826	676.0826	0.0183	0.0163	681.3871
Total	**0.2624**	**1.0949**	**2.8810**	**0.0104**	**0.8483**	**0.0135**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,075.9596**	**1,075.9596**	**0.0317**	**0.0739**	**1,098.7698**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0374	0.9307	0.3191	3.7200e-003	0.1217	8.8700e-003	0.1306	0.0350	8.4800e-003	0.0435		399.8770	399.8770	0.0134	0.0576	417.3828
Worker	0.2250	0.1642	2.5619	6.6500e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		676.0826	676.0826	0.0183	0.0163	681.3871
Total	**0.2624**	**1.0949**	**2.8810**	**0.0104**	**0.8483**	**0.0135**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,075.9596**	**1,075.9596**	**0.0317**	**0.0739**	**1,098.7698**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0623	0.0455	0.7094	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		187.2229	187.2229	5.0700e-003	4.5000e-003	188.6918
Total	**0.0623**	**0.0455**	**0.7094**	**1.8400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**187.2229**	**187.2229**	**5.0700e-003**	**4.5000e-003**	**188.6918**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0623	0.0455	0.7094	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		187.2229	187.2229	5.0700e-003	4.5000e-003	188.6918
Total	**0.0623**	**0.0455**	**0.7094**	**1.8400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**187.2229**	**187.2229**	**5.0700e-003**	**4.5000e-003**	**188.6918**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.0450**	**0.0329**	**0.5124**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**135.2165**	**135.2165**	**3.6600e-003**	**3.2500e-003**	**136.2774**

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.0450**	**0.0329**	**0.5124**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**135.2165**	**135.2165**	**3.6600e-003**	**3.2500e-003**	**136.2774**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Unmitigated	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
NaturalGas Unmitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526

Small Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1069.14	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.06914	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Unmitigated	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1713	0.7262	17.7993	0.0454		2.6736	2.6736		2.6736	2.6736	327.8421	630.0000	957.8421	0.9777	0.0223	988.9153
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**10.1544**	**0.7597**	**20.7112**	**0.0456**		**2.6897**	**2.6897**		**2.6897**	**2.6897**	**327.8421**	**635.2501**	**963.0922**	**0.9828**	**0.0223**	**994.2938**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0612	0.5225	0.2224	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	667.0588	667.0588	0.0128	0.0122	671.0228
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**1.0443**	**0.5560**	**3.1342**	**3.4900e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**672.3089**	**672.3089**	**0.0179**	**0.0122**	**676.4013**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase - more time (change from 2days to 5 days) to grade to decrease daily NOX

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	2.00	5.00
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1897	0.7159	0.6259	2.0100e-003	0.1329	0.0249	0.1578	0.0323	0.0231	0.0553	0.0000	188.3512	188.3512	0.0246	0.0158	193.6643
Maximum	**0.1897**	**0.7159**	**0.6259**	**2.0100e-003**	**0.1329**	**0.0249**	**0.1578**	**0.0323**	**0.0231**	**0.0553**	**0.0000**	**188.3512**	**188.3512**	**0.0246**	**0.0158**	**193.6643**

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					
2022	0.1897	0.7159	0.6259	2.0100e-003	0.0901	0.0249	0.1150	0.0230	0.0231	0.0461	0.0000	188.3511	188.3511	0.0246	0.0158	193.6643
Maximum	**0.1897**	**0.7159**	**0.6259**	**2.0100e-003**	**0.0901**	**0.0249**	**0.1150**	**0.0230**	**0.0231**	**0.0461**	**0.0000**	**188.3511**	**188.3511**	**0.0246**	**0.0158**	**193.6643**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.23**	**0.00**	**27.15**	**28.67**	**0.00**	**16.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.5175	0.5175
2	4-1-2022	6-30-2022	0.3880	0.3880
		Highest	0.5175	0.5175

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	0.2889	0.0133	0.5865	5.9000e-004		0.0354	0.0354		0.0354	0.0354	3.7177	7.7394	11.4571	0.0117	2.5000e-004	11.8240
Energy	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	152.0164	152.0164	1.7200e-003	1.6500e-003	152.5501
Mobile	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Waste						0.0000	0.0000		0.0000	0.0000	15.3461	0.0000	15.3461	0.9069	0.0000	38.0194
Water						0.0000	0.0000		0.0000	0.0000	1.2050	8.4764	9.6814	0.1238	2.9200e-003	13.6462
Total	**0.6133**	**0.4062**	**3.4019**	**6.3500e-003**	**0.5344**	**0.0458**	**0.5802**	**0.1426**	**0.0455**	**0.1881**	**20.2687**	**661.1269**	**681.3956**	**1.0843**	**0.0293**	**717.2367**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1751	0.0107	0.3668	6.0000e-005		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	8.1597	8.1597	7.3000e-004	1.4000e-004	8.2192
Energy	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	152.0164	152.0164	1.7200e-003	1.6500e-003	152.5501
Mobile	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Waste						0.0000	0.0000		0.0000	0.0000	7.6731	0.0000	7.6731	0.4535	0.0000	19.0097
Water						0.0000	0.0000		0.0000	0.0000	1.2050	8.4764	9.6814	0.1238	2.9200e-003	13.6462
Total	**0.4994**	**0.4037**	**3.1822**	**5.8200e-003**	**0.5344**	**0.0129**	**0.5473**	**0.1426**	**0.0126**	**0.1552**	**8.8780**	**661.5471**	**670.4251**	**0.6199**	**0.0292**	**694.6222**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**18.57**	**0.63**	**6.46**	**8.35**	**0.00**	**71.84**	**5.67**	**0.00**	**72.30**	**17.49**	**56.20**	**-0.06**	**1.61**	**42.83**	**0.38**	**3.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/24/2022	5	5	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	1/25/2022	6/13/2022	5	100	
5	Paving	Paving	6/14/2022	6/20/2022	5	5	
6	Architectural Coating	Architectural Coating	6/21/2022	6/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					0.0536	0.0000	0.0536	8.1200e-003	0.0000	8.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**0.0536**	**1.6900e-003**	**0.0553**	**8.1200e-003**	**1.6100e-003**	**9.7300e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.1400e-003	0.0438	9.7600e-003	1.5000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	3.0000e-004	1.4700e-003	0.0000	15.2872	15.2872	8.1000e-004	2.4300e-003	16.0303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.8600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4535	0.4535	1.0000e-005	1.0000e-005	0.4575
Total	**1.3100e-003**	**0.0439**	**0.0116**	**1.5000e-004**	**4.8100e-003**	**3.1000e-004**	**5.1200e-003**	**1.3200e-003**	**3.0000e-004**	**1.6200e-003**	**0.0000**	**15.7407**	**15.7407**	**8.2000e-004**	**2.4400e-003**	**16.4879**

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					0.0199	0.0000	0.0199	3.0100e-003	0.0000	3.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**0.0199**	**1.6900e-003**	**0.0216**	**3.0100e-003**	**1.6100e-003**	**4.6200e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.1400e-003	0.0438	9.7600e-003	1.5000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	3.0000e-004	1.4700e-003	0.0000	15.2872	15.2872	8.1000e-004	2.4300e-003	16.0303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.8600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4535	0.4535	1.0000e-005	1.0000e-005	0.4575
Total	**1.3100e-003**	**0.0439**	**0.0116**	**1.5000e-004**	**4.8100e-003**	**3.1000e-004**	**5.1200e-003**	**1.3200e-003**	**3.0000e-004**	**1.6200e-003**	**0.0000**	**15.7407**	**15.7407**	**8.2000e-004**	**2.4400e-003**	**16.4879**

3.3 Site Preparation - 2022

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**2.7000e-004**	**1.3000e-004**	**4.0000e-004**	**3.0000e-005**	**1.2000e-004**	**1.5000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0227	0.0227	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0227**	**0.0227**	**0.0000**	**0.0000**	**0.0229**

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**1.0000e-004**	**1.3000e-004**	**2.3000e-004**	**1.0000e-005**	**1.2000e-004**	**1.3000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0227	0.0227	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0227**	**0.0227**	**0.0000**	**0.0000**	**0.0229**

3.4 Grading - 2022

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					0.0142	0.0000	0.0142	6.5600e-003	0.0000	6.5600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0300	0.0148	4.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	3.0954	3.0954	1.0000e-003	0.0000	3.1204
Total	**2.7100e-003**	**0.0300**	**0.0148**	**4.0000e-005**	**0.0142**	**1.2900e-003**	**0.0155**	**6.5600e-003**	**1.1900e-003**	**7.7500e-003**	**0.0000**	**3.0954**	**3.0954**	**1.0000e-003**	**0.0000**	**3.1204**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	4.6500e-003	0.1784	0.0398	6.3000e-004	0.0174	1.2600e-003	0.0186	4.7700e-003	1.2000e-003	5.9700e-003	0.0000	62.2915	62.2915	3.3100e-003	9.8800e-003	65.3195
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1814	0.1814	1.0000e-005	0.0000	0.1830
Total	**4.7200e-003**	**0.1785**	**0.0405**	**6.3000e-004**	**0.0176**	**1.2600e-003**	**0.0188**	**4.8300e-003**	**1.2000e-003**	**6.0300e-003**	**0.0000**	**62.4729**	**62.4729**	**3.3200e-003**	**9.8800e-003**	**65.5026**

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					5.2600e-003	0.0000	5.2600e-003	2.4300e-003	0.0000	2.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0300	0.0148	4.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	3.0954	3.0954	1.0000e-003	0.0000	3.1204
Total	**2.7100e-003**	**0.0300**	**0.0148**	**4.0000e-005**	**5.2600e-003**	**1.2900e-003**	**6.5500e-003**	**2.4300e-003**	**1.1900e-003**	**3.6200e-003**	**0.0000**	**3.0954**	**3.0954**	**1.0000e-003**	**0.0000**	**3.1204**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	4.6500e-003	0.1784	0.0398	6.3000e-004	0.0174	1.2600e-003	0.0186	4.7700e-003	1.2000e-003	5.9700e-003	0.0000	62.2915	62.2915	3.3100e-003	9.8800e-003	65.3195
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1814	0.1814	1.0000e-005	0.0000	0.1830
Total	**4.7200e-003**	**0.1785**	**0.0405**	**6.3000e-004**	**0.0176**	**1.2600e-003**	**0.0188**	**4.8300e-003**	**1.2000e-003**	**6.0300e-003**	**0.0000**	**62.4729**	**62.4729**	**3.3200e-003**	**9.8800e-003**	**65.5026**

3.5 Building Construction - 2022

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	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0739	50.0739	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0739**	**50.0739**	**0.0162**	**0.0000**	**50.4787**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8500e-003	0.0489	0.0162	1.9000e-004	5.9900e-003	4.4000e-004	6.4300e-003	1.7300e-003	4.2000e-004	2.1500e-003	0.0000	18.1410	18.1410	6.1000e-004	2.6200e-003	18.9360
Worker	0.0111	9.2800e-003	0.1207	3.2000e-004	0.0356	2.3000e-004	0.0359	9.4600e-003	2.1000e-004	9.6700e-003	0.0000	29.4798	29.4798	8.4000e-004	8.0000e-004	29.7393
Total	**0.0130**	**0.0581**	**0.1369**	**5.1000e-004**	**0.0416**	**6.7000e-004**	**0.0423**	**0.0112**	**6.3000e-004**	**0.0118**	**0.0000**	**47.6208**	**47.6208**	**1.4500e-003**	**3.4200e-003**	**48.6753**

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	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0738	50.0738	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0738**	**50.0738**	**0.0162**	**0.0000**	**50.4787**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8500e-003	0.0489	0.0162	1.9000e-004	5.9900e-003	4.4000e-004	6.4300e-003	1.7300e-003	4.2000e-004	2.1500e-003	0.0000	18.1410	18.1410	6.1000e-004	2.6200e-003	18.9360
Worker	0.0111	9.2800e-003	0.1207	3.2000e-004	0.0356	2.3000e-004	0.0359	9.4600e-003	2.1000e-004	9.6700e-003	0.0000	29.4798	29.4798	8.4000e-004	8.0000e-004	29.7393
Total	**0.0130**	**0.0581**	**0.1369**	**5.1000e-004**	**0.0416**	**6.7000e-004**	**0.0423**	**0.0112**	**6.3000e-004**	**0.0118**	**0.0000**	**47.6208**	**47.6208**	**1.4500e-003**	**3.4200e-003**	**48.6753**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.6700e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4082	0.4082	1.0000e-005	1.0000e-005	0.4118
Total	**1.5000e-004**	**1.3000e-004**	**1.6700e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4082**	**0.4082**	**1.0000e-005**	**1.0000e-005**	**0.4118**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.6700e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4082	0.4082	1.0000e-005	1.0000e-005	0.4118
Total	**1.5000e-004**	**1.3000e-004**	**1.6700e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4082**	**0.4082**	**1.0000e-005**	**1.0000e-005**	**0.4118**

3.7 Architectural Coating - 2022

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	0.1274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1279**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2948	0.2948	1.0000e-005	1.0000e-005	0.2974
Total	**1.1000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2948**	**0.2948**	**1.0000e-005**	**1.0000e-005**	**0.2974**

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	0.1274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1279**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2948	0.2948	1.0000e-005	1.0000e-005	0.2974
Total	**1.1000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2948**	**0.2948**	**1.0000e-005**	**1.0000e-005**	**0.2974**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Unmitigated	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	62.2112	62.2112	0.0000	0.0000	62.2112
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	62.2112	62.2112	0.0000	0.0000	62.2112
NaturalGas Mitigated	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8052	89.8052	1.7200e-003	1.6500e-003	90.3389
NaturalGas Unmitigated	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8052	89.8052	1.7200e-003	1.6500e-003	90.3389

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	390237	2.1000e-003	0.0180	7.6500e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8245	20.8245	4.0000e-004	3.8000e-004	20.9483
High Turnover (Sit Down Restaurant)	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.0700e-003**	**0.0814**	**0.0609**	**4.9000e-004**		**6.2700e-003**	**6.2700e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**89.8053**	**89.8053**	**1.7200e-003**	**1.6400e-003**	**90.3389**

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	390237	2.1000e-003	0.0180	7.6500e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8245	20.8245	4.0000e-004	3.8000e-004	20.9483
High Turnover (Sit Down Restaurant)	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.0700e-003**	**0.0814**	**0.0609**	**4.9000e-004**		**6.2700e-003**	**6.2700e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**89.8053**	**89.8053**	**1.7200e-003**	**1.6400e-003**	**90.3389**

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	134184	17.1030	0.0000	0.0000	17.1030
High Turnover (Sit Down Restaurant)	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	176152	22.4522	0.0000	0.0000	22.4522
Total		**62.2112**	**0.0000**	**0.0000**	**62.2112**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	134184	17.1030	0.0000	0.0000	17.1030
High Turnover (Sit Down Restaurant)	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	176152	22.4522	0.0000	0.0000	22.4522
Total		**62.2112**	**0.0000**	**0.0000**	**62.2112**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.1751	0.0107	0.3668	6.0000e-005		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	8.1597	8.1597	7.3000e-004	1.4000e-004	8.2192
Unmitigated	0.2889	0.0133	0.5865	5.9000e-004		0.0354	0.0354		0.0354	0.0354	3.7177	7.7394	11.4571	0.0117	2.5000e-004	11.8240

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1146	9.0800e-003	0.2225	5.7000e-004		0.0334	0.0334		0.0334	0.0334	3.7177	7.1441	10.8618	0.0111	2.5000e-004	11.2141
Landscaping	0.0112	4.1900e-003	0.3640	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.5954	0.5954	5.8000e-004	0.0000	0.6099
Total	**0.2889**	**0.0133**	**0.5865**	**5.9000e-004**		**0.0354**	**0.0354**		**0.0354**	**0.0354**	**3.7177**	**7.7394**	**11.4571**	**0.0117**	**2.5000e-004**	**11.8240**

Small Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.6000e-004	6.5300e-003	2.7800e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5643	7.5643	1.4000e-004	1.4000e-004	7.6093
Landscaping	0.0112	4.1900e-003	0.3640	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.5954	0.5954	5.8000e-004	0.0000	0.6099
Total	**0.1751**	**0.0107**	**0.3668**	**6.0000e-005**		**2.5400e-003**	**2.5400e-003**		**2.5400e-003**	**2.5400e-003**	**0.0000**	**8.1597**	**8.1597**	**7.2000e-004**	**1.4000e-004**	**8.2192**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.6814	0.1238	2.9200e-003	13.6462
Unmitigated	9.6814	0.1238	2.9200e-003	13.6462

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.28039 / 1.43764	6.5439	0.0743	1.7500e-003	8.9244
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.6814**	**0.1238**	**2.9200e-003**	**13.6462**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.28039 / 1.43764	6.5439	0.0743	1.7500e-003	8.9244
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.6814**	**0.1238**	**2.9200e-003**	**13.6462**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.6731	0.4535	0.0000	19.0097
Unmitigated	15.3461	0.9069	0.0000	38.0194

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	16.1	3.2682	0.1931	0.0000	8.0967
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**15.3461**	**0.9069**	**0.0000**	**38.0194**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	8.05	1.6341	0.0966	0.0000	4.0484
High Turnover (Sit Down Restaurant)	29.75	6.0390	0.3569	0.0000	14.9613
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**7.6731**	**0.4535**	**0.0000**	**19.0097**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project defaults

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase -

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	AcresOfGrading	1.50	3.75
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	51.2136	188.2768	46.4129	0.6418	25.1591	1.7788	26.9380	7.6990	1.6829	9.3818	0.0000	70,119.9758	70,119.9758	4.0842	10.8989	73,469.9499
Maximum	**51.2136**	**188.2768**	**46.4129**	**0.6418**	**25.1591**	**1.7788**	**26.9380**	**7.6990**	**1.6829**	**9.3818**	**0.0000**	**70,119.9758**	**70,119.9758**	**4.0842**	**10.8989**	**73,469.9499**

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					
2022	51.2136	188.2768	46.4129	0.6418	20.4900	1.7788	22.2688	5.9140	1.6829	7.5969	0.0000	70,119.9758	70,119.9758	4.0842	10.8989	73,469.9499
Maximum	**51.2136**	**188.2768**	**46.4129**	**0.6418**	**20.4900**	**1.7788**	**22.2688**	**5.9140**	**1.6829**	**7.5969**	**0.0000**	**70,119.9758**	**70,119.9758**	**4.0842**	**10.8989**	**73,469.9499**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**18.56**	**0.00**	**17.33**	**23.18**	**0.00**	**19.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Total	**12.2598**	**3.1563**	**38.3652**	**0.0810**	**3.4158**	**2.7497**	**6.1655**	**0.9098**	**2.7479**	**3.6577**	**327.8421**	**4,551.1801**	**4,879.0222**	**1.2766**	**0.2024**	**4,971.2480**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Total	**3.1497**	**2.9527**	**20.7882**	**0.0390**	**3.4158**	**0.1184**	**3.5342**	**0.9098**	**0.1165**	**1.0264**	**0.0000**	**4,588.2389**	**4,588.2389**	**0.3117**	**0.1924**	**4,653.3555**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**74.31**	**6.45**	**45.81**	**51.93**	**0.00**	**95.69**	**42.68**	**0.00**	**95.76**	**71.94**	**100.00**	**-0.81**	**5.96**	**75.59**	**4.95**	**6.39**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/19/2022	5	2	
4	Building Construction	Building Construction	1/20/2022	6/8/2022	5	100	
5	Paving	Paving	6/9/2022	6/15/2022	5	5	
6	Architectural Coating	Architectural Coating	6/16/2022	6/22/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 3.75

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					10.7196	0.0000	10.7196	1.6231	0.0000	1.6231			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**10.7196**	**0.3375**	**11.0571**	**1.6231**	**0.3225**	**1.9456**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2251	8.6508	1.9725	0.0308	0.8664	0.0619	0.9283	0.2376	0.0592	0.2968		3,370.8271	3,370.8271	0.1787	0.5348	3,534.6774
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.2621**	**8.6788**	**2.3344**	**0.0317**	**0.9782**	**0.0626**	**1.0408**	**0.2672**	**0.0599**	**0.3271**		**3,469.3404**	**3,469.3404**	**0.1815**	**0.5375**	**3,634.0588**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.9716	0.0000	3.9716	0.6013	0.0000	0.6013			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**3.9716**	**0.3375**	**4.3091**	**0.6013**	**0.3225**	**0.9239**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2251	8.6508	1.9725	0.0308	0.8664	0.0619	0.9283	0.2376	0.0592	0.2968		3,370.8271	3,370.8271	0.1787	0.5348	3,534.6774
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.2621**	**8.6788**	**2.3344**	**0.0317**	**0.9782**	**0.0626**	**1.0408**	**0.2672**	**0.0599**	**0.3271**		**3,469.3404**	**3,469.3404**	**0.1815**	**0.5375**	**3,634.0588**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.1965	0.0000	0.1965	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.1965**	**0.2573**	**0.4538**	**0.0212**	**0.2367**	**0.2580**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.4173	0.0000	7.4173	2.8355	0.0000	2.8355			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**7.4173**	**0.5173**	**7.9345**	**2.8355**	**0.4759**	**3.3114**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	4.5857	176.2499	40.1874	0.6269	17.6525	1.2610	18.9134	4.8398	1.2064	6.0462		68,676.3454	68,676.3454	3.6405	10.8968	72,014.5898
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**4.6153**	**176.2722**	**40.4769**	**0.6277**	**17.7419**	**1.2616**	**19.0034**	**4.8635**	**1.2070**	**6.0704**		**68,755.1560**	**68,755.1560**	**3.6428**	**10.8989**	**72,094.0949**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					2.7481	0.0000	2.7481	1.0506	0.0000	1.0506			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.7481**	**0.5173**	**3.2654**	**1.0506**	**0.4759**	**1.5265**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	4.5857	176.2499	40.1874	0.6269	17.6525	1.2610	18.9134	4.8398	1.2064	6.0462		68,676.3454	68,676.3454	3.6405	10.8968	72,014.5898
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**4.6153**	**176.2722**	**40.4769**	**0.6277**	**17.7419**	**1.2616**	**19.0034**	**4.8635**	**1.2070**	**6.0704**		**68,755.1560**	**68,755.1560**	**3.6428**	**10.8989**	**72,094.0949**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0369	0.9691	0.3301	3.7200e-003	0.1217	8.9000e-003	0.1306	0.0350	8.5100e-003	0.0436		400.0273	400.0273	0.0133	0.0577	417.5541
Worker	0.2408	0.1815	2.3522	6.2900e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		640.3366	640.3366	0.0185	0.0174	645.9787
Total	**0.2778**	**1.1506**	**2.6823**	**0.0100**	**0.8483**	**0.0136**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,040.3638**	**1,040.3638**	**0.0318**	**0.0751**	**1,063.5328**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0369	0.9691	0.3301	3.7200e-003	0.1217	8.9000e-003	0.1306	0.0350	8.5100e-003	0.0436		400.0273	400.0273	0.0133	0.0577	417.5541
Worker	0.2408	0.1815	2.3522	6.2900e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		640.3366	640.3366	0.0185	0.0174	645.9787
Total	**0.2778**	**1.1506**	**2.6823**	**0.0100**	**0.8483**	**0.0136**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,040.3638**	**1,040.3638**	**0.0318**	**0.0751**	**1,063.5328**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0667	0.0503	0.6514	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		177.3240	177.3240	5.1300e-003	4.8100e-003	178.8864
Total	**0.0667**	**0.0503**	**0.6514**	**1.7400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**177.3240**	**177.3240**	**5.1300e-003**	**4.8100e-003**	**178.8864**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0667	0.0503	0.6514	1.7400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		177.3240	177.3240	5.1300e-003	4.8100e-003	178.8864
Total	**0.0667**	**0.0503**	**0.6514**	**1.7400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**177.3240**	**177.3240**	**5.1300e-003**	**4.8100e-003**	**178.8864**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.0482**	**0.0363**	**0.4704**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**128.0673**	**128.0673**	**3.7000e-003**	**3.4800e-003**	**129.1958**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.0482**	**0.0363**	**0.4704**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**128.0673**	**128.0673**	**3.7000e-003**	**3.4800e-003**	**129.1958**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017
Unmitigated	2.0557	1.9509	17.3204	0.0328	3.4158	0.0257	3.4415	0.9098	0.0239	0.9337		3,373.5007	3,373.5007	0.2833	0.1702	3,431.3017

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
NaturalGas Unmitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1069.14	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.06914	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Unmitigated	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1713	0.7262	17.7993	0.0454		2.6736	2.6736		2.6736	2.6736	327.8421	630.0000	957.8421	0.9777	0.0223	988.9153
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**10.1544**	**0.7597**	**20.7112**	**0.0456**		**2.6897**	**2.6897**		**2.6897**	**2.6897**	**327.8421**	**635.2501**	**963.0922**	**0.9828**	**0.0223**	**994.2938**

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0612	0.5225	0.2224	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	667.0588	667.0588	0.0128	0.0122	671.0228
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**1.0443**	**0.5560**	**3.1342**	**3.4900e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**672.3089**	**672.3089**	**0.0179**	**0.0122**	**676.4013**

7.0 Water Detail

7.1 Mitigation Measures Water

Small Scale Project defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project Defaults

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase -

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	51.2104	181.4012	45.7436	0.6416	23.9661	1.7762	25.7423	7.5702	1.6804	9.2505	0.0000	70,104.2487	70,104.2487	4.0903	10.8952	73,453.2738
Maximum	**51.2104**	**181.4012**	**45.7436**	**0.6416**	**23.9661**	**1.7762**	**25.7423**	**7.5702**	**1.6804**	**9.2505**	**0.0000**	**70,104.2487**	**70,104.2487**	**4.0903**	**10.8952**	**73,453.2738**

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					
2022	51.2104	181.4012	45.7436	0.6416	20.0479	1.7762	21.8242	5.8663	1.6804	7.5467	0.0000	70,104.2487	70,104.2487	4.0903	10.8952	73,453.2738
Maximum	**51.2104**	**181.4012**	**45.7436**	**0.6416**	**20.0479**	**1.7762**	**21.8242**	**5.8663**	**1.6804**	**7.5467**	**0.0000**	**70,104.2487**	**70,104.2487**	**4.0903**	**10.8952**	**73,453.2738**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**16.35**	**0.00**	**15.22**	**22.51**	**0.00**	**18.42**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Total	**12.3142**	**3.0102**	**38.3583**	**0.0825**	**3.4158**	**2.7497**	**6.1655**	**0.9098**	**2.7479**	**3.6577**	**327.8421**	**4,698.0332**	**5,025.8753**	**1.2638**	**0.1947**	**5,115.4756**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Energy	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
Mobile	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Total	**3.2040**	**2.8065**	**20.7813**	**0.0404**	**3.4158**	**0.1184**	**3.5342**	**0.9098**	**0.1165**	**1.0263**	**0.0000**	**4,735.0920**	**4,735.0920**	**0.2989**	**0.1846**	**4,797.5831**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	73.98	6.77	45.82	51.02	0.00	95.70	42.68	0.00	95.76	71.94	100.00	-0.79	5.79	76.35	5.15	6.21

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/24/2022	5	2	
4	Building Construction	Building Construction	1/25/2022	6/13/2022	5	100	
5	Paving	Paving	6/14/2022	6/20/2022	5	5	
6	Architectural Coating	Architectural Coating	6/21/2022	6/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					10.7196	0.0000	10.7196	1.6231	0.0000	1.6231			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**10.7196**	**0.3375**	**11.0571**	**1.6231**	**0.3225**	**1.9456**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2306	8.3135	1.9384	0.0308	0.8664	0.0618	0.9282	0.2376	0.0591	0.2966		3,369.8392	3,369.8392	0.1790	0.5347	3,533.6450
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.2652**	**8.3387**	**2.3325**	**0.0318**	**0.9782**	**0.0625**	**1.0407**	**0.2672**	**0.0598**	**0.3269**		**3,473.8519**	**3,473.8519**	**0.1818**	**0.5372**	**3,638.4738**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					3.9716	0.0000	3.9716	0.6013	0.0000	0.6013			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**3.9716**	**0.3375**	**4.3091**	**0.6013**	**0.3225**	**0.9239**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

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	0.2306	8.3135	1.9384	0.0308	0.8664	0.0618	0.9282	0.2376	0.0591	0.2966		3,369.8392	3,369.8392	0.1790	0.5347	3,533.6450
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.2652**	**8.3387**	**2.3325**	**0.0318**	**0.9782**	**0.0625**	**1.0407**	**0.2672**	**0.0598**	**0.3269**		**3,473.8519**	**3,473.8519**	**0.1818**	**0.5372**	**3,638.4738**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					0.1965	0.0000	0.1965	0.0212	0.0000	0.0212			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.1965**	**0.2573**	**0.4538**	**0.0212**	**0.2367**	**0.2580**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					6.2242	0.0000	6.2242	2.7067	0.0000	2.7067			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**6.2242**	**0.5173**	**6.7415**	**2.7067**	**0.4759**	**3.1826**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	4.6985	169.3764	39.4923	0.6267	17.6525	1.2584	18.9108	4.8398	1.2039	6.0437		68,656.2188	68,656.2188	3.6466	10.8932	71,993.5557
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**4.7262**	**169.3966**	**39.8076**	**0.6276**	**17.7419**	**1.2589**	**19.0008**	**4.8635**	**1.2045**	**6.0679**		**68,739.4289**	**68,739.4289**	**3.6489**	**10.8952**	**72,077.4187**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					2.3061	0.0000	2.3061	1.0028	0.0000	1.0028			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.3061**	**0.5173**	**2.8233**	**1.0028**	**0.4759**	**1.4787**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

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	4.6985	169.3764	39.4923	0.6267	17.6525	1.2584	18.9108	4.8398	1.2039	6.0437		68,656.2188	68,656.2188	3.6466	10.8932	71,993.5557
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**4.7262**	**169.3966**	**39.8076**	**0.6276**	**17.7419**	**1.2589**	**19.0008**	**4.8635**	**1.2045**	**6.0679**		**68,739.4289**	**68,739.4289**	**3.6489**	**10.8952**	**72,077.4187**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0374	0.9307	0.3191	3.7200e-003	0.1217	8.8700e-003	0.1306	0.0350	8.4800e-003	0.0435		399.8770	399.8770	0.0134	0.0576	417.3828
Worker	0.2250	0.1642	2.5619	6.6500e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		676.0826	676.0826	0.0183	0.0163	681.3871
Total	**0.2624**	**1.0949**	**2.8810**	**0.0104**	**0.8483**	**0.0135**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,075.9596**	**1,075.9596**	**0.0317**	**0.0739**	**1,098.7698**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0374	0.9307	0.3191	3.7200e-003	0.1217	8.8700e-003	0.1306	0.0350	8.4800e-003	0.0435		399.8770	399.8770	0.0134	0.0576	417.3828
Worker	0.2250	0.1642	2.5619	6.6500e-003	0.7266	4.6600e-003	0.7312	0.1927	4.2900e-003	0.1970		676.0826	676.0826	0.0183	0.0163	681.3871
Total	**0.2624**	**1.0949**	**2.8810**	**0.0104**	**0.8483**	**0.0135**	**0.8618**	**0.2277**	**0.0128**	**0.2405**		**1,075.9596**	**1,075.9596**	**0.0317**	**0.0739**	**1,098.7698**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758		1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**		**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0623	0.0455	0.7094	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		187.2229	187.2229	5.0700e-003	4.5000e-003	188.6918
Total	**0.0623**	**0.0455**	**0.7094**	**1.8400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**187.2229**	**187.2229**	**5.0700e-003**	**4.5000e-003**	**188.6918**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	0.6469	5.9174	7.0348	0.0113		0.2961	0.2961		0.2758	0.2758	0.0000	1,035.8246	1,035.8246	0.3017		1,043.3677
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6469**	**5.9174**	**7.0348**	**0.0113**		**0.2961**	**0.2961**		**0.2758**	**0.2758**	**0.0000**	**1,035.8246**	**1,035.8246**	**0.3017**		**1,043.3677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0623	0.0455	0.7094	1.8400e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		187.2229	187.2229	5.0700e-003	4.5000e-003	188.6918
Total	**0.0623**	**0.0455**	**0.7094**	**1.8400e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**187.2229**	**187.2229**	**5.0700e-003**	**4.5000e-003**	**188.6918**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.0450**	**0.0329**	**0.5124**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**135.2165**	**135.2165**	**3.6600e-003**	**3.2500e-003**	**136.2774**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	50.9609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.1654**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.0450**	**0.0329**	**0.5124**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**135.2165**	**135.2165**	**3.6600e-003**	**3.2500e-003**	**136.2774**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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	lb/day										lb/day					
Mitigated	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293
Unmitigated	2.1100	1.8048	17.3135	0.0342	3.4158	0.0257	3.4415	0.9098	0.0238	0.9337		3,520.3538	3,520.3538	0.2706	0.1625	3,575.5293

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526
NaturalGas Unmitigated	0.0497	0.4457	0.3336	2.7100e-003		0.0344	0.0344		0.0344	0.0344		542.4292	542.4292	0.0104	9.9400e-003	545.6526

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1069.14	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.06914	0.0115	0.0985	0.0419	6.3000e-004		7.9700e-003	7.9700e-003		7.9700e-003	7.9700e-003		125.7814	125.7814	2.4100e-003	2.3100e-003	126.5288
High Turnover (Sit Down Restaurant)	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0497**	**0.4457**	**0.3336**	**2.7100e-003**		**0.0344**	**0.0344**		**0.0344**	**0.0344**		**542.4292**	**542.4292**	**0.0104**	**9.9500e-003**	**545.6526**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	1.0443	0.5560	3.1342	3.4900e-003		0.0583	0.0583		0.0583	0.0583	0.0000	672.3089	672.3089	0.0179	0.0122	676.4013
Unmitigated	10.1544	0.7597	20.7112	0.0456		2.6897	2.6897		2.6897	2.6897	327.8421	635.2501	963.0923	0.9828	0.0223	994.2938

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	9.1713	0.7262	17.7993	0.0454		2.6736	2.6736		2.6736	2.6736	327.8421	630.0000	957.8421	0.9777	0.0223	988.9153
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**10.1544**	**0.7597**	**20.7112**	**0.0456**		**2.6897**	**2.6897**		**2.6897**	**2.6897**	**327.8421**	**635.2501**	**963.0922**	**0.9828**	**0.0223**	**994.2938**

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0698					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8242					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0612	0.5225	0.2224	3.3400e-003		0.0423	0.0423		0.0423	0.0423	0.0000	667.0588	667.0588	0.0128	0.0122	671.0228
Landscaping	0.0892	0.0335	2.9119	1.5000e-004		0.0161	0.0161		0.0161	0.0161		5.2501	5.2501	5.1300e-003		5.3784
Total	**1.0443**	**0.5560**	**3.1342**	**3.4900e-003**		**0.0583**	**0.0583**		**0.0583**	**0.0583**	**0.0000**	**672.3089**	**672.3089**	**0.0179**	**0.0122**	**676.4013**

7.0 Water Detail

7.1 Mitigation Measures Water

Small Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Small Scale Project Defaults

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	227.00	Space	0.00	90,800.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	35.00	Dwelling Unit	0.89	35,000.00	100

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - 1 acre site with 35 units and 5,000 sf high turn-over rest with one level of sub parking

Construction Phase -

Demolition - based one Appendix A CalEEMod User's Guide. FAR=2.5
Floor space=435600*2.5=108,900 floor space

Grading - 1 level subterrrane parking (10 feet)
10 feet * 1acre =435600 cubic--> 16133.317 cubic yards

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - Rule 403

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	16,133.32
tblLandUse	LotAcreage	2.04	0.00
tblLandUse	LotAcreage	0.92	0.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.1967	0.9835	0.6855	2.9500e-003	0.1603	0.0268	0.1871	0.0396	0.0249	0.0645	0.0000	281.7885	281.7885	0.0296	0.0306	291.6436
Maximum	**0.1967**	**0.9835**	**0.6855**	**2.9500e-003**	**0.1603**	**0.0268**	**0.1871**	**0.0396**	**0.0249**	**0.0645**	**0.0000**	**281.7885**	**281.7885**	**0.0296**	**0.0306**	**291.6436**

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					
2022	0.1967	0.9835	0.6855	2.9500e-003	0.1166	0.0268	0.1434	0.0302	0.0249	0.0551	0.0000	281.7884	281.7884	0.0296	0.0306	291.6436
Maximum	**0.1967**	**0.9835**	**0.6855**	**2.9500e-003**	**0.1166**	**0.0268**	**0.1434**	**0.0302**	**0.0249**	**0.0551**	**0.0000**	**281.7884**	**281.7884**	**0.0296**	**0.0306**	**291.6436**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.26**	**0.00**	**23.36**	**23.70**	**0.00**	**14.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.7888	0.7888
2	4-1-2022	6-30-2022	0.3880	0.3880
		Highest	0.7888	0.7888

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	0.2889	0.0133	0.5865	5.9000e-004		0.0354	0.0354		0.0354	0.0354	3.7177	7.7394	11.4571	0.0117	2.5000e-004	11.8240
Energy	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	152.0164	152.0164	1.7200e-003	1.6500e-003	152.5501
Mobile	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Waste						0.0000	0.0000		0.0000	0.0000	15.3461	0.0000	15.3461	0.9069	0.0000	38.0194
Water						0.0000	0.0000		0.0000	0.0000	1.2050	8.4764	9.6814	0.1238	2.9200e-003	13.6462
Total	**0.6133**	**0.4062**	**3.4019**	**6.3500e-003**	**0.5344**	**0.0458**	**0.5802**	**0.1426**	**0.0455**	**0.1881**	**20.2687**	**661.1269**	**681.3956**	**1.0843**	**0.0293**	**717.2367**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1751	0.0107	0.3668	6.0000e-005		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	8.1597	8.1597	7.3000e-004	1.4000e-004	8.2192
Energy	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	152.0164	152.0164	1.7200e-003	1.6500e-003	152.5501
Mobile	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Waste						0.0000	0.0000		0.0000	0.0000	7.6731	0.0000	7.6731	0.4535	0.0000	19.0097
Water						0.0000	0.0000		0.0000	0.0000	1.2050	8.4764	9.6814	0.1238	2.9200e-003	13.6462
Total	**0.4994**	**0.4037**	**3.1822**	**5.8200e-003**	**0.5344**	**0.0129**	**0.5473**	**0.1426**	**0.0126**	**0.1552**	**8.8780**	**661.5471**	**670.4251**	**0.6199**	**0.0292**	**694.6222**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**18.57**	**0.63**	**6.46**	**8.35**	**0.00**	**71.84**	**5.67**	**0.00**	**72.30**	**17.49**	**56.20**	**-0.06**	**1.61**	**42.83**	**0.38**	**3.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/24/2022	5	2	

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	1/25/2022	6/13/2022	5	100	
5	Paving	Paving	6/14/2022	6/20/2022	5	5	
6	Architectural Coating	Architectural Coating	6/21/2022	6/27/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 70,875; Residential Outdoor: 23,625; Non-Residential Indoor: 7,500; Non-Residential Outdoor: 2,500; Striped Parking Area: 5,448 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
Demolition	4	10.00	0.00	495.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	2,017.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	65.00	19.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					0.0536	0.0000	0.0536	8.1200e-003	0.0000	8.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**0.0536**	**1.6900e-003**	**0.0553**	**8.1200e-003**	**1.6100e-003**	**9.7300e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.1400e-003	0.0438	9.7600e-003	1.5000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	3.0000e-004	1.4700e-003	0.0000	15.2872	15.2872	8.1000e-004	2.4300e-003	16.0303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.8600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4535	0.4535	1.0000e-005	1.0000e-005	0.4575
Total	**1.3100e-003**	**0.0439**	**0.0116**	**1.5000e-004**	**4.8100e-003**	**3.1000e-004**	**5.1200e-003**	**1.3200e-003**	**3.0000e-004**	**1.6200e-003**	**0.0000**	**15.7407**	**15.7407**	**8.2000e-004**	**2.4400e-003**	**16.4879**

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					0.0199	0.0000	0.0199	3.0100e-003	0.0000	3.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**	**0.0199**	**1.6900e-003**	**0.0216**	**3.0100e-003**	**1.6100e-003**	**4.6200e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.1400e-003	0.0438	9.7600e-003	1.5000e-004	4.2600e-003	3.1000e-004	4.5700e-003	1.1700e-003	3.0000e-004	1.4700e-003	0.0000	15.2872	15.2872	8.1000e-004	2.4300e-003	16.0303
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.8600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4535	0.4535	1.0000e-005	1.0000e-005	0.4575
Total	**1.3100e-003**	**0.0439**	**0.0116**	**1.5000e-004**	**4.8100e-003**	**3.1000e-004**	**5.1200e-003**	**1.3200e-003**	**3.0000e-004**	**1.6200e-003**	**0.0000**	**15.7407**	**15.7407**	**8.2000e-004**	**2.4400e-003**	**16.4879**

3.3 Site Preparation - 2022

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**2.7000e-004**	**1.3000e-004**	**4.0000e-004**	**3.0000e-005**	**1.2000e-004**	**1.5000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0227	0.0227	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0227**	**0.0227**	**0.0000**	**0.0000**	**0.0229**

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**1.0000e-004**	**1.3000e-004**	**2.3000e-004**	**1.0000e-005**	**1.2000e-004**	**1.3000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0227	0.0227	0.0000	0.0000	0.0229
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0227**	**0.0227**	**0.0000**	**0.0000**	**0.0229**

3.4 Grading - 2022

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					0.0156	0.0000	0.0156	6.7700e-003	0.0000	6.7700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0300	0.0148	4.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	3.0954	3.0954	1.0000e-003	0.0000	3.1204
Total	**2.7100e-003**	**0.0300**	**0.0148**	**4.0000e-005**	**0.0156**	**1.2900e-003**	**0.0169**	**6.7700e-003**	**1.1900e-003**	**7.9600e-003**	**0.0000**	**3.0954**	**3.0954**	**1.0000e-003**	**0.0000**	**3.1204**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	0.0116	0.4460	0.0994	1.5700e-003	0.0434	3.1500e-003	0.0465	0.0119	3.0100e-003	0.0149	0.0000	155.7288	155.7288	8.2600e-003	0.0247	163.2988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1814	0.1814	1.0000e-005	0.0000	0.1830
Total	**0.0117**	**0.4460**	**0.1002**	**1.5700e-003**	**0.0436**	**3.1500e-003**	**0.0468**	**0.0120**	**3.0100e-003**	**0.0150**	**0.0000**	**155.9102**	**155.9102**	**8.2700e-003**	**0.0247**	**163.4819**

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					5.7700e-003	0.0000	5.7700e-003	2.5100e-003	0.0000	2.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7100e-003	0.0300	0.0148	4.0000e-005		1.2900e-003	1.2900e-003		1.1900e-003	1.1900e-003	0.0000	3.0954	3.0954	1.0000e-003	0.0000	3.1204
Total	**2.7100e-003**	**0.0300**	**0.0148**	**4.0000e-005**	**5.7700e-003**	**1.2900e-003**	**7.0600e-003**	**2.5100e-003**	**1.1900e-003**	**3.7000e-003**	**0.0000**	**3.0954**	**3.0954**	**1.0000e-003**	**0.0000**	**3.1204**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	0.0116	0.4460	0.0994	1.5700e-003	0.0434	3.1500e-003	0.0465	0.0119	3.0100e-003	0.0149	0.0000	155.7288	155.7288	8.2600e-003	0.0247	163.2988
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	7.4000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1814	0.1814	1.0000e-005	0.0000	0.1830
Total	**0.0117**	**0.4460**	**0.1002**	**1.5700e-003**	**0.0436**	**3.1500e-003**	**0.0468**	**0.0120**	**3.0100e-003**	**0.0150**	**0.0000**	**155.9102**	**155.9102**	**8.2700e-003**	**0.0247**	**163.4819**

3.5 Building Construction - 2022

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	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0739	50.0739	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0739**	**50.0739**	**0.0162**	**0.0000**	**50.4787**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8500e-003	0.0489	0.0162	1.9000e-004	5.9900e-003	4.4000e-004	6.4300e-003	1.7300e-003	4.2000e-004	2.1500e-003	0.0000	18.1410	18.1410	6.1000e-004	2.6200e-003	18.9360
Worker	0.0111	9.2800e-003	0.1207	3.2000e-004	0.0356	2.3000e-004	0.0359	9.4600e-003	2.1000e-004	9.6700e-003	0.0000	29.4798	29.4798	8.4000e-004	8.0000e-004	29.7393
Total	**0.0130**	**0.0581**	**0.1369**	**5.1000e-004**	**0.0416**	**6.7000e-004**	**0.0423**	**0.0112**	**6.3000e-004**	**0.0118**	**0.0000**	**47.6208**	**47.6208**	**1.4500e-003**	**3.4200e-003**	**48.6753**

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	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0738	50.0738	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0738**	**50.0738**	**0.0162**	**0.0000**	**50.4787**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8500e-003	0.0489	0.0162	1.9000e-004	5.9900e-003	4.4000e-004	6.4300e-003	1.7300e-003	4.2000e-004	2.1500e-003	0.0000	18.1410	18.1410	6.1000e-004	2.6200e-003	18.9360
Worker	0.0111	9.2800e-003	0.1207	3.2000e-004	0.0356	2.3000e-004	0.0359	9.4600e-003	2.1000e-004	9.6700e-003	0.0000	29.4798	29.4798	8.4000e-004	8.0000e-004	29.7393
Total	**0.0130**	**0.0581**	**0.1369**	**5.1000e-004**	**0.0416**	**6.7000e-004**	**0.0423**	**0.0112**	**6.3000e-004**	**0.0118**	**0.0000**	**47.6208**	**47.6208**	**1.4500e-003**	**3.4200e-003**	**48.6753**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.6700e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4082	0.4082	1.0000e-005	1.0000e-005	0.4118
Total	**1.5000e-004**	**1.3000e-004**	**1.6700e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4082**	**0.4082**	**1.0000e-005**	**1.0000e-005**	**0.4118**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.6700e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4082	0.4082	1.0000e-005	1.0000e-005	0.4118
Total	**1.5000e-004**	**1.3000e-004**	**1.6700e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4082**	**0.4082**	**1.0000e-005**	**1.0000e-005**	**0.4118**

3.7 Architectural Coating - 2022

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	0.1274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1279**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2948	0.2948	1.0000e-005	1.0000e-005	0.2974
Total	**1.1000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2948**	**0.2948**	**1.0000e-005**	**1.0000e-005**	**0.2974**

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	0.1274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**0.1279**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2100e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.2948	0.2948	1.0000e-005	1.0000e-005	0.2974
Total	**1.1000e-004**	**9.0000e-005**	**1.2100e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2948**	**0.2948**	**1.0000e-005**	**1.0000e-005**	**0.2974**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970
Unmitigated	0.3153	0.3116	2.7545	5.2700e-003	0.5344	4.0800e-003	0.5385	0.1426	3.7900e-003	0.1464	0.0000	492.8946	492.8946	0.0402	0.0245	501.1970

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	190.40	171.85	143.15	618,504	618,504
High Turnover (Sit Down Restaurant)	560.90	612.00	713.20	804,012	804,012
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	751.30	783.85	856.35	1,422,516	1,422,516

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	62.2112	62.2112	0.0000	0.0000	62.2112
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	62.2112	62.2112	0.0000	0.0000	62.2112
NaturalGas Mitigated	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8052	89.8052	1.7200e-003	1.6500e-003	90.3389
NaturalGas Unmitigated	9.0700e-003	0.0814	0.0609	4.9000e-004		6.2700e-003	6.2700e-003		6.2700e-003	6.2700e-003	0.0000	89.8052	89.8052	1.7200e-003	1.6500e-003	90.3389

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	390237	2.1000e-003	0.0180	7.6500e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8245	20.8245	4.0000e-004	3.8000e-004	20.9483
High Turnover (Sit Down Restaurant)	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.0700e-003**	**0.0814**	**0.0609**	**4.9000e-004**		**6.2700e-003**	**6.2700e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**89.8053**	**89.8053**	**1.7200e-003**	**1.6400e-003**	**90.3389**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	390237	2.1000e-003	0.0180	7.6500e-003	1.1000e-004		1.4500e-003	1.4500e-003		1.4500e-003	1.4500e-003	0.0000	20.8245	20.8245	4.0000e-004	3.8000e-004	20.9483
High Turnover (Sit Down Restaurant)	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**9.0700e-003**	**0.0814**	**0.0609**	**4.9000e-004**		**6.2700e-003**	**6.2700e-003**		**6.2700e-003**	**6.2700e-003**	**0.0000**	**89.8053**	**89.8053**	**1.7200e-003**	**1.6400e-003**	**90.3389**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	134184	17.1030	0.0000	0.0000	17.1030
High Turnover (Sit Down Restaurant)	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	176152	22.4522	0.0000	0.0000	22.4522
Total		**62.2112**	**0.0000**	**0.0000**	**62.2112**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	134184	17.1030	0.0000	0.0000	17.1030
High Turnover (Sit Down Restaurant)	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	176152	22.4522	0.0000	0.0000	22.4522
Total		**62.2112**	**0.0000**	**0.0000**	**62.2112**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.1751	0.0107	0.3668	6.0000e-005		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	8.1597	8.1597	7.3000e-004	1.4000e-004	8.2192
Unmitigated	0.2889	0.0133	0.5865	5.9000e-004		0.0354	0.0354		0.0354	0.0354	3.7177	7.7394	11.4571	0.0117	2.5000e-004	11.8240

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1146	9.0800e-003	0.2225	5.7000e-004		0.0334	0.0334		0.0334	0.0334	3.7177	7.1441	10.8618	0.0111	2.5000e-004	11.2141
Landscaping	0.0112	4.1900e-003	0.3640	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.5954	0.5954	5.8000e-004	0.0000	0.6099
Total	**0.2889**	**0.0133**	**0.5865**	**5.9000e-004**		**0.0354**	**0.0354**		**0.0354**	**0.0354**	**3.7177**	**7.7394**	**11.4571**	**0.0117**	**2.5000e-004**	**11.8240**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1504					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	7.6000e-004	6.5300e-003	2.7800e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5643	7.5643	1.4000e-004	1.4000e-004	7.6093
Landscaping	0.0112	4.1900e-003	0.3640	2.0000e-005		2.0100e-003	2.0100e-003		2.0100e-003	2.0100e-003	0.0000	0.5954	0.5954	5.8000e-004	0.0000	0.6099
Total	**0.1751**	**0.0107**	**0.3668**	**6.0000e-005**		**2.5400e-003**	**2.5400e-003**		**2.5400e-003**	**2.5400e-003**	**0.0000**	**8.1597**	**8.1597**	**7.2000e-004**	**1.4000e-004**	**8.2192**

7.0 Water Detail

7.1 Mitigation Measures Water

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.6814	0.1238	2.9200e-003	13.6462
Unmitigated	9.6814	0.1238	2.9200e-003	13.6462

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.28039 / 1.43764	6.5439	0.0743	1.7500e-003	8.9244
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.6814**	**0.1238**	**2.9200e-003**	**13.6462**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.28039 / 1.43764	6.5439	0.0743	1.7500e-003	8.9244
High Turnover (Sit Down Restaurant)	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.6814**	**0.1238**	**2.9200e-003**	**13.6462**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.6731	0.4535	0.0000	19.0097
Unmitigated	15.3461	0.9069	0.0000	38.0194

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	16.1	3.2682	0.1931	0.0000	8.0967
High Turnover (Sit Down Restaurant)	59.5	12.0780	0.7138	0.0000	29.9226
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**15.3461**	**0.9069**	**0.0000**	**38.0194**

Small Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	8.05	1.6341	0.0966	0.0000	4.0484
High Turnover (Sit Down Restaurant)	29.75	6.0390	0.3569	0.0000	14.9613
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**7.6731**	**0.4535**	**0.0000**	**19.0097**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Appendix B

Medium Scale Representative Project Emissions Data

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase - increase duration of demolition to decrease daily PM10 emissions
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	12.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.6935	98.3442	28.1270	0.3109	15.7614	1.3249	17.0862	5.7515	1.2403	6.9918	0.0000	33,785.5323	33,785.5323	2.3282	5.0311	35,343.0084
2023	73.8729	16.1797	21.3072	0.0524	2.4457	0.6365	3.0821	0.6562	0.6094	1.2656	0.0000	5,145.6874	5,145.6874	0.5458	0.1967	5,217.2126
Maximum	**73.8729**	**98.3442**	**28.1270**	**0.3109**	**15.7614**	**1.3249**	**17.0862**	**5.7515**	**1.2403**	**6.9918**	**0.0000**	**33,785.5323**	**33,785.5323**	**2.3282**	**5.0311**	**35,343.0084**

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					
2022	3.6935	98.3442	28.1270	0.3109	11.0378	1.3249	12.3627	3.5555	1.2403	4.7958	0.0000	33,785.5323	33,785.5323	2.3282	5.0311	35,343.0084
2023	73.8729	16.1797	21.3072	0.0524	2.4457	0.6365	3.0821	0.6562	0.6094	1.2656	0.0000	5,145.6874	5,145.6874	0.5458	0.1967	5,217.2126
Maximum	**73.8729**	**98.3442**	**28.1270**	**0.3109**	**11.0378**	**1.3249**	**12.3627**	**3.5555**	**1.2403**	**4.7958**	**0.0000**	**33,785.5323**	**33,785.5323**	**2.3282**	**5.0311**	**35,343.0084**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	25.94	0.00	23.42	34.27	0.00	26.59	0.00	0.00	0.00	0.00	0.00	0.00

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Total	**40.8922**	**8.3025**	**116.3247**	**0.2512**	**8.7112**	**9.7406**	**18.4518**	**2.3203**	**9.7360**	**12.0563**	**1,170.8648**	**11,927.0336**	**13,097.8984**	**4.1980**	**0.5073**	**13,354.0218**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Total	**8.3561**	**7.5751**	**53.5499**	**0.1009**	**8.7112**	**0.3429**	**9.0541**	**2.3203**	**0.3383**	**2.6586**	**0.0000**	**12,059.3866**	**12,059.3866**	**0.7519**	**0.4715**	**12,218.6914**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**79.57**	**8.76**	**53.97**	**59.82**	**0.00**	**96.48**	**50.93**	**0.00**	**96.52**	**77.95**	**100.00**	**-1.11**	**7.93**	**82.09**	**7.05**	**8.50**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	
4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					11.0893	0.0000	11.0893	1.6790	0.0000	1.6790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**11.0893**	**0.8379**	**11.9272**	**1.6790**	**0.7829**	**2.4619**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2330	8.9552	2.0419	0.0319	0.8969	0.0641	0.9610	0.2459	0.0613	0.3072		3,489.4107	3,489.4107	0.1850	0.5537	3,659.0252
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.2812**	**8.9915**	**2.5123**	**0.0331**	**1.0422**	**0.0650**	**1.1072**	**0.2845**	**0.0622**	**0.3466**		**3,617.4780**	**3,617.4780**	**0.1887**	**0.5571**	**3,788.2210**

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					4.1086	0.0000	4.1086	0.6221	0.0000	0.6221			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**4.1086**	**0.8379**	**4.9465**	**0.6221**	**0.7829**	**1.4050**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2330	8.9552	2.0419	0.0319	0.8969	0.0641	0.9610	0.2459	0.0613	0.3072		3,489.4107	3,489.4107	0.1850	0.5537	3,659.0252
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.2812**	**8.9915**	**2.5123**	**0.0331**	**1.0422**	**0.0650**	**1.1072**	**0.2845**	**0.0622**	**0.3466**		**3,617.4780**	**3,617.4780**	**0.1887**	**0.5571**	**3,788.2210**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.5036	0.0000	7.5036	3.4885	0.0000	3.4885			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.5036**	**0.7423**	**8.2459**	**3.4885**	**0.6829**	**4.1714**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1161	81.3327	18.5450	0.2893	8.1459	0.5819	8.7278	2.2334	0.5567	2.7901		31,691.5365	31,691.5365	1.6800	5.0284	33,232.0101
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**2.1532**	**81.3606**	**18.9068**	**0.2903**	**8.2577**	**0.5826**	**8.8403**	**2.2630**	**0.5574**	**2.8204**		**31,790.0498**	**31,790.0498**	**1.6828**	**5.0311**	**33,331.3914**

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					2.7801	0.0000	2.7801	1.2925	0.0000	1.2925			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7801**	**0.7423**	**3.5224**	**1.2925**	**0.6829**	**1.9754**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1161	81.3327	18.5450	0.2893	8.1459	0.5819	8.7278	2.2334	0.5567	2.7901		31,691.5365	31,691.5365	1.6800	5.0284	33,232.0101
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**2.1532**	**81.3606**	**18.9068**	**0.2903**	**8.2577**	**0.5826**	**8.8403**	**2.2630**	**0.5574**	**2.8204**		**31,790.0498**	**31,790.0498**	**1.6828**	**5.0311**	**33,331.3914**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1011	2.6522	0.9035	0.0102	0.3331	0.0244	0.3574	0.0959	0.0233	0.1192		1,094.8115	1,094.8115	0.0365	0.1579	1,142.7795
Worker	0.7003	0.5277	6.8394	0.0183	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,861.9017	1,861.9017	0.0539	0.0505	1,878.3074
Total	**0.8014**	**3.1799**	**7.7429**	**0.0285**	**2.4457**	**0.0379**	**2.4835**	**0.6562**	**0.0358**	**0.6919**		**2,956.7132**	**2,956.7132**	**0.0903**	**0.2084**	**3,021.0869**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1011	2.6522	0.9035	0.0102	0.3331	0.0244	0.3574	0.0959	0.0233	0.1192		1,094.8115	1,094.8115	0.0365	0.1579	1,142.7795
Worker	0.7003	0.5277	6.8394	0.0183	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,861.9017	1,861.9017	0.0539	0.0505	1,878.3074
Total	**0.8014**	**3.1799**	**7.7429**	**0.0285**	**2.4457**	**0.0379**	**2.4835**	**0.6562**	**0.0358**	**0.6919**		**2,956.7132**	**2,956.7132**	**0.0903**	**0.2084**	**3,021.0869**

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0578	2.0897	0.7975	9.6900e-003	0.3331	0.0101	0.3432	0.0959	9.6600e-003	0.1056		1,043.2256	1,043.2256	0.0348	0.1501	1,088.8337
Worker	0.6503	0.4661	6.2952	0.0177	2.1126	0.0128	2.1253	0.5603	0.0117	0.5720		1,812.9385	1,812.9385	0.0483	0.0466	1,828.0309
Total	**0.7081**	**2.5558**	**7.0928**	**0.0274**	**2.4457**	**0.0229**	**2.4685**	**0.6562**	**0.0214**	**0.6776**		**2,856.1641**	**2,856.1641**	**0.0831**	**0.1967**	**2,916.8647**

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0578	2.0897	0.7975	9.6900e-003	0.3331	0.0101	0.3432	0.0959	9.6600e-003	0.1056		1,043.2256	1,043.2256	0.0348	0.1501	1,088.8337
Worker	0.6503	0.4661	6.2952	0.0177	2.1126	0.0128	2.1253	0.5603	0.0117	0.5720		1,812.9385	1,812.9385	0.0483	0.0466	1,828.0309
Total	**0.7081**	**2.5558**	**7.0928**	**0.0274**	**2.4457**	**0.0229**	**2.4685**	**0.6562**	**0.0214**	**0.6776**		**2,856.1641**	**2,856.1641**	**0.0831**	**0.1967**	**2,916.8647**

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

3.7 Architectural Coating - 2023

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	73.5505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**73.7422**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1307	0.0937	1.2657	3.5600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		364.5062	364.5062	9.7100e-003	9.3700e-003	367.5406
Total	**0.1307**	**0.0937**	**1.2657**	**3.5600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**364.5062**	**364.5062**	**9.7100e-003**	**9.3700e-003**	**367.5406**

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	73.5505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**73.7422**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1307	0.0937	1.2657	3.5600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		364.5062	364.5062	9.7100e-003	9.3700e-003	367.5406
Total	**0.1307**	**0.0937**	**1.2657**	**3.5600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**364.5062**	**364.5062**	**9.7100e-003**	**9.3700e-003**	**367.5406**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Unmitigated	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
NaturalGas Unmitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	3818.36	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2124.9	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	38.1644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.81836	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2.1249	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	0.0381644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Unmitigated	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	32.7545	2.5935	63.5690	0.1622		9.5485	9.5485		9.5485	9.5485	1,170.8648	2,250.0000	3,420.8648	3.4917	0.0795	3,531.8405
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**36.1632**	**2.7130**	**73.9422**	**0.1627**		**9.6058**	**9.6058**		**9.6058**	**9.6058**	**1,170.8648**	**2,268.6940**	**3,439.5588**	**3.5099**	**0.0795**	**3,550.9891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2184	1.8662	0.7941	0.0119		0.1509	0.1509		0.1509	0.1509	0.0000	2,382.3529	2,382.3529	0.0457	0.0437	2,396.5101
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**3.6271**	**1.9856**	**11.1674**	**0.0125**		**0.2082**	**0.2082**		**0.2082**	**0.2082**	**0.0000**	**2,401.0469**	**2,401.0469**	**0.0638**	**0.0437**	**2,415.6587**

7.0 Water Detail

7.1 Mitigation Measures Water

Medium Scale Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase - increase duration of demolition to decrease daily PM10 emissions
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	12.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.7431	95.1697	27.8385	0.3108	15.7614	1.3237	17.0850	5.7515	1.2391	6.9906	0.0000	33,781.7440	33,781.7440	2.3310	5.0293	35,338.7494
2023	73.8638	16.0418	21.8366	0.0534	2.4457	0.6364	3.0821	0.6562	0.6094	1.2655	0.0000	5,244.8303	5,244.8303	0.5457	0.1934	5,315.3381
Maximum	**73.8638**	**95.1697**	**27.8385**	**0.3108**	**15.7614**	**1.3237**	**17.0850**	**5.7515**	**1.2391**	**6.9906**	**0.0000**	**33,781.7440**	**33,781.7440**	**2.3310**	**5.0293**	**35,338.7494**

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					
2022	3.7431	95.1697	27.8385	0.3108	11.0378	1.3237	12.3615	3.5555	1.2391	4.7946	0.0000	33,781.7440	33,781.7440	2.3310	5.0293	35,338.7494
2023	73.8638	16.0418	21.8366	0.0534	2.4457	0.6364	3.0821	0.6562	0.6094	1.2655	0.0000	5,244.8303	5,244.8303	0.5457	0.1934	5,315.3381
Maximum	**73.8638**	**95.1697**	**27.8385**	**0.3108**	**11.0378**	**1.3237**	**12.3615**	**3.5555**	**1.2391**	**4.7946**	**0.0000**	**33,781.7440**	**33,781.7440**	**2.3310**	**5.0293**	**35,338.7494**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	25.94	0.00	23.42	34.27	0.00	26.60	0.00	0.00	0.00	0.00	0.00	0.00

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Total	**41.0016**	**7.9524**	**116.7006**	**0.2549**	**8.7112**	**9.7406**	**18.4518**	**2.3203**	**9.7360**	**12.0563**	**1,170.8648**	**12,302.5149**	**13,473.3797**	**4.1720**	**0.4891**	**13,723.4397**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Total	**8.4655**	**7.2251**	**53.9257**	**0.1046**	**8.7112**	**0.3429**	**9.0541**	**2.3203**	**0.3383**	**2.6586**	**0.0000**	**12,434.8679**	**12,434.8679**	**0.7260**	**0.4533**	**12,588.1093**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**79.35**	**9.15**	**53.79**	**58.96**	**0.00**	**96.48**	**50.93**	**0.00**	**96.53**	**77.95**	**100.00**	**-1.08**	**7.71**	**82.60**	**7.32**	**8.27**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	
4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					11.0893	0.0000	11.0893	1.6790	0.0000	1.6790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**11.0893**	**0.8379**	**11.9272**	**1.6790**	**0.7829**	**2.4619**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2387	8.6059	2.0066	0.0318	0.8969	0.0639	0.9609	0.2459	0.0612	0.3071		3,488.3881	3,488.3881	0.1853	0.5535	3,657.9565
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.2837**	**8.6388**	**2.5190**	**0.0332**	**1.0422**	**0.0649**	**1.1071**	**0.2845**	**0.0620**	**0.3465**		**3,623.6046**	**3,623.6046**	**0.1889**	**0.5567**	**3,794.2339**

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					4.1086	0.0000	4.1086	0.6221	0.0000	0.6221			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**4.1086**	**0.8379**	**4.9465**	**0.6221**	**0.7829**	**1.4050**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2387	8.6059	2.0066	0.0318	0.8969	0.0639	0.9609	0.2459	0.0612	0.3071		3,488.3881	3,488.3881	0.1853	0.5535	3,657.9565
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.2837**	**8.6388**	**2.5190**	**0.0332**	**1.0422**	**0.0649**	**1.1071**	**0.2845**	**0.0620**	**0.3465**		**3,623.6046**	**3,623.6046**	**0.1889**	**0.5567**	**3,794.2339**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.5036	0.0000	7.5036	3.4885	0.0000	3.4885			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.5036**	**0.7423**	**8.2459**	**3.4885**	**0.6829**	**4.1714**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1682	78.1608	18.2242	0.2892	8.1459	0.5807	8.7266	2.2334	0.5556	2.7889		31,682.2488	31,682.2488	1.6828	5.0268	33,222.3037
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**2.2028**	**78.1861**	**18.6183**	**0.2902**	**8.2577**	**0.5814**	**8.8391**	**2.2630**	**0.5562**	**2.8192**		**31,786.2616**	**31,786.2616**	**1.6856**	**5.0293**	**33,327.1324**

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					2.7801	0.0000	2.7801	1.2925	0.0000	1.2925			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7801**	**0.7423**	**3.5224**	**1.2925**	**0.6829**	**1.9754**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1682	78.1608	18.2242	0.2892	8.1459	0.5807	8.7266	2.2334	0.5556	2.7889		31,682.2488	31,682.2488	1.6828	5.0268	33,222.3037
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**2.2028**	**78.1861**	**18.6183**	**0.2902**	**8.2577**	**0.5814**	**8.8391**	**2.2630**	**0.5562**	**2.8192**		**31,786.2616**	**31,786.2616**	**1.6856**	**5.0293**	**33,327.1324**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1023	2.5472	0.8733	0.0102	0.3331	0.0243	0.3573	0.0959	0.0232	0.1191		1,094.4003	1,094.4003	0.0366	0.1577	1,142.3107
Worker	0.6541	0.4776	7.4491	0.0193	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,965.8402	1,965.8402	0.0532	0.0473	1,981.2639
Total	**0.7564**	**3.0248**	**8.3224**	**0.0295**	**2.4457**	**0.0378**	**2.4835**	**0.6562**	**0.0357**	**0.6918**		**3,060.2405**	**3,060.2405**	**0.0898**	**0.2050**	**3,123.5747**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1023	2.5472	0.8733	0.0102	0.3331	0.0243	0.3573	0.0959	0.0232	0.1191		1,094.4003	1,094.4003	0.0366	0.1577	1,142.3107
Worker	0.6541	0.4776	7.4491	0.0193	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,965.8402	1,965.8402	0.0532	0.0473	1,981.2639
Total	**0.7564**	**3.0248**	**8.3224**	**0.0295**	**2.4457**	**0.0378**	**2.4835**	**0.6562**	**0.0357**	**0.6918**		**3,060.2405**	**3,060.2405**	**0.0898**	**0.2050**	**3,123.5747**

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0599	1.9959	0.7732	9.6800e-003	0.3331	0.0100	0.3431	0.0959	9.6000e-003	0.1055		1,041.4689	1,041.4689	0.0349	0.1497	1,086.9618
Worker	0.6052	0.4220	6.8489	0.0187	2.1126	0.0128	2.1253	0.5603	0.0117	0.5720		1,913.8382	1,913.8382	0.0477	0.0436	1,928.0284
Total	**0.6651**	**2.4179**	**7.6221**	**0.0284**	**2.4457**	**0.0228**	**2.4684**	**0.6562**	**0.0213**	**0.6775**		**2,955.3070**	**2,955.3070**	**0.0826**	**0.1934**	**3,014.9902**

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0599	1.9959	0.7732	9.6800e-003	0.3331	0.0100	0.3431	0.0959	9.6000e-003	0.1055		1,041.4689	1,041.4689	0.0349	0.1497	1,086.9618
Worker	0.6052	0.4220	6.8489	0.0187	2.1126	0.0128	2.1253	0.5603	0.0117	0.5720		1,913.8382	1,913.8382	0.0477	0.0436	1,928.0284
Total	**0.6651**	**2.4179**	**7.6221**	**0.0284**	**2.4457**	**0.0228**	**2.4684**	**0.6562**	**0.0213**	**0.6775**		**2,955.3070**	**2,955.3070**	**0.0826**	**0.1934**	**3,014.9902**

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

3.7 Architectural Coating - 2023

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	73.5505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**73.7422**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1217	0.0848	1.3770	3.7600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		384.7929	384.7929	9.5800e-003	8.7700e-003	387.6459
Total	**0.1217**	**0.0848**	**1.3770**	**3.7600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**384.7929**	**384.7929**	**9.5800e-003**	**8.7700e-003**	**387.6459**

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	73.5505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**73.7422**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1217	0.0848	1.3770	3.7600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		384.7929	384.7929	9.5800e-003	8.7700e-003	387.6459
Total	**0.1217**	**0.0848**	**1.3770**	**3.7600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**384.7929**	**384.7929**	**9.5800e-003**	**8.7700e-003**	**387.6459**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Unmitigated	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
NaturalGas Unmitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	3818.36	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2124.9	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	38.1644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.81836	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2.1249	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	0.0381644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Unmitigated	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	32.7545	2.5935	63.5690	0.1622		9.5485	9.5485		9.5485	9.5485	1,170.8648	2,250.0000	3,420.8648	3.4917	0.0795	3,531.8405
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**36.1632**	**2.7130**	**73.9422**	**0.1627**		**9.6058**	**9.6058**		**9.6058**	**9.6058**	**1,170.8648**	**2,268.6940**	**3,439.5588**	**3.5099**	**0.0795**	**3,550.9891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2184	1.8662	0.7941	0.0119		0.1509	0.1509		0.1509	0.1509	0.0000	2,382.3529	2,382.3529	0.0457	0.0437	2,396.5101
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**3.6271**	**1.9856**	**11.1674**	**0.0125**		**0.2082**	**0.2082**		**0.2082**	**0.2082**	**0.0000**	**2,401.0469**	**2,401.0469**	**0.0638**	**0.0437**	**2,415.6587**

7.0 Water Detail

7.1 Mitigation Measures Water

Medium Scale Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase - increase duration of demolition to decrease daily PM10 emissions
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	12.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3421	3.4874	2.8655	0.0103	0.6235	0.1059	0.7294	0.1681	0.1008	0.2689	0.0000	963.1046	963.1046	0.0876	0.0858	990.8691
2023	0.4692	0.1974	0.2727	6.1000e-004	0.0249	8.3400e-003	0.0333	6.6800e-003	7.9300e-003	0.0146	0.0000	54.1897	54.1897	6.8300e-003	1.6800e-003	54.8611
Maximum	**0.4692**	**3.4874**	**2.8655**	**0.0103**	**0.6235**	**0.1059**	**0.7294**	**0.1681**	**0.1008**	**0.2689**	**0.0000**	**963.1046**	**963.1046**	**0.0876**	**0.0858**	**990.8691**

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					
2022	0.3421	3.4874	2.8655	0.0103	0.4594	0.1059	0.5653	0.1241	0.1008	0.2249	0.0000	963.1043	963.1043	0.0876	0.0858	990.8688
2023	0.4692	0.1974	0.2727	6.1000e-004	0.0249	8.3400e-003	0.0333	6.6800e-003	7.9300e-003	0.0146	0.0000	54.1896	54.1896	6.8300e-003	1.6800e-003	54.8610
Maximum	**0.4692**	**3.4874**	**2.8655**	**0.0103**	**0.4594**	**0.1059**	**0.5653**	**0.1241**	**0.1008**	**0.2249**	**0.0000**	**963.1043**	**963.1043**	**0.0876**	**0.0858**	**990.8688**

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**25.31**	**0.00**	**21.52**	**25.19**	**0.00**	**15.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2022**	**3-31-2022**	1.8047	1.8047
2	**4-1-2022**	**6-30-2022**	0.6578	0.6578
3	**7-1-2022**	**9-30-2022**	0.6651	0.6651
4	**10-1-2022**	**12-31-2022**	0.6716	0.6716
5	**1-1-2023**	**3-31-2023**	0.6441	0.6441
		Highest	1.8047	1.8047

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	1.0134	0.0474	2.0913	2.1000e-003		0.1265	0.1265		0.1265	0.1265	13.2774	27.6344	40.9118	0.0417	9.0000e-004	42.2218
Energy	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	347.7410	347.7410	3.5600e-003	3.4000e-003	348.8433
Mobile	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Waste						0.0000	0.0000		0.0000	0.0000	21.3364	0.0000	21.3364	1.2609	0.0000	52.8600
Water						0.0000	0.0000		0.0000	0.0000	3.5187	26.3475	29.8661	0.3614	8.5300e-003	41.4441
Total	**1.7872**	**1.0058**	**9.2442**	**0.0172**	**1.4361**	**0.1502**	**1.5863**	**0.3831**	**0.1494**	**0.5325**	**38.1324**	**1,717.1661**	**1,755.2986**	**1.7680**	**0.0749**	**1,821.8295**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6067	0.0383	1.3066	2.2000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003	0.0000	29.1353	29.1353	2.5800e-003	5.0000e-004	29.3474
Energy	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	347.7410	347.7410	3.5600e-003	3.4000e-003	348.8433
Mobile	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Waste						0.0000	0.0000		0.0000	0.0000	10.6682	0.0000	10.6682	0.6305	0.0000	26.4300
Water						0.0000	0.0000		0.0000	0.0000	3.5187	26.3475	29.8661	0.3614	8.5300e-003	41.4441
Total	**1.3805**	**0.9968**	**8.4595**	**0.0153**	**1.4361**	**0.0327**	**1.4688**	**0.3831**	**0.0319**	**0.4150**	**14.1869**	**1,718.6670**	**1,732.8539**	**1.0984**	**0.0745**	**1,782.5251**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.76**	**0.90**	**8.49**	**10.93**	**0.00**	**78.23**	**7.41**	**0.00**	**78.63**	**22.06**	**62.80**	**-0.09**	**1.28**	**37.87**	**0.53**	**2.16**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.1608	0.0000	0.1608	0.0244	0.0000	0.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2410	0.2024	3.5000e-004		0.0122	0.0122		0.0114	0.0114	0.0000	30.5626	30.5626	7.7900e-003	0.0000	30.7574
Total	**0.0245**	**0.2410**	**0.2024**	**3.5000e-004**	**0.1608**	**0.0122**	**0.1729**	**0.0244**	**0.0114**	**0.0357**	**0.0000**	**30.5626**	**30.5626**	**7.7900e-003**	**0.0000**	**30.7574**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	7.0000e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7098	1.7098	5.0000e-005	5.0000e-005	1.7249
Total	**4.0800e-003**	**0.1320**	**0.0363**	**4.8000e-004**	**0.0149**	**9.4000e-004**	**0.0158**	**4.0600e-003**	**9.0000e-004**	**4.9600e-003**	**0.0000**	**47.6023**	**47.6023**	**2.4900e-003**	**7.3300e-003**	**49.8483**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.0596	0.0000	0.0596	9.0200e-003	0.0000	9.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2410	0.2024	3.5000e-004		0.0122	0.0122		0.0114	0.0114	0.0000	30.5626	30.5626	7.7900e-003	0.0000	30.7573
Total	**0.0245**	**0.2410**	**0.2024**	**3.5000e-004**	**0.0596**	**0.0122**	**0.0717**	**9.0200e-003**	**0.0114**	**0.0204**	**0.0000**	**30.5626**	**30.5626**	**7.7900e-003**	**0.0000**	**30.7573**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	7.0000e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7098	1.7098	5.0000e-005	5.0000e-005	1.7249
Total	**4.0800e-003**	**0.1320**	**0.0363**	**4.8000e-004**	**0.0149**	**9.4000e-004**	**0.0158**	**4.0600e-003**	**9.0000e-004**	**4.9600e-003**	**0.0000**	**47.6023**	**47.6023**	**2.4900e-003**	**7.3300e-003**	**49.8483**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					8.8000e-004	0.0000	8.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**8.8000e-004**	**8.9000e-004**	**1.7700e-003**	**1.0000e-004**	**8.2000e-004**	**9.2000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0976	0.0000	0.0976	0.0454	0.0000	0.0454	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2208	0.1199	2.7000e-004		9.6500e-003	9.6500e-003		8.8800e-003	8.8800e-003	0.0000	23.5335	23.5335	7.6100e-003	0.0000	23.7238
Total	**0.0200**	**0.2208**	**0.1199**	**2.7000e-004**	**0.0976**	**9.6500e-003**	**0.1072**	**0.0454**	**8.8800e-003**	**0.0542**	**0.0000**	**23.5335**	**23.5335**	**7.6100e-003**	**0.0000**	**23.7238**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**0.0284**	**1.0706**	**0.2434**	**3.7700e-003**	**0.1055**	**7.5700e-003**	**0.1131**	**0.0290**	**7.2400e-003**	**0.0362**	**0.0000**	**374.8666**	**374.8666**	**0.0199**	**0.0593**	**393.0420**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0361	0.0000	0.0361	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2208	0.1199	2.7000e-004		9.6500e-003	9.6500e-003		8.8800e-003	8.8800e-003	0.0000	23.5335	23.5335	7.6100e-003	0.0000	23.7238
Total	**0.0200**	**0.2208**	**0.1199**	**2.7000e-004**	**0.0361**	**9.6500e-003**	**0.0458**	**0.0168**	**8.8800e-003**	**0.0257**	**0.0000**	**23.5335**	**23.5335**	**7.6100e-003**	**0.0000**	**23.7238**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**0.0284**	**1.0706**	**0.2434**	**3.7700e-003**	**0.1055**	**7.5700e-003**	**0.1131**	**0.0290**	**7.2400e-003**	**0.0362**	**0.0000**	**374.8666**	**374.8666**	**0.0199**	**0.0593**	**393.0420**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.1874	1.4750	1.4497	2.5300e-003		0.0709	0.0709		0.0680	0.0680	0.0000	209.7569	209.7569	0.0405	0.0000	210.7686
Total	**0.1874**	**1.4750**	**1.4497**	**2.5300e-003**		**0.0709**	**0.0709**		**0.0680**	**0.0680**	**0.0000**	**209.7569**	**209.7569**	**0.0405**	**0.0000**	**210.7686**

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	0.0103	0.2701	0.0896	1.0300e-003	0.0331	2.4500e-003	0.0356	9.5500e-003	2.3500e-003	0.0119	0.0000	100.2911	100.2911	3.3500e-003	0.0145	104.6859
Worker	0.0654	0.0545	0.7087	1.8800e-003	0.2092	1.3700e-003	0.2105	0.0556	1.2600e-003	0.0568	0.0000	173.1506	173.1506	4.9400e-003	4.7000e-003	174.6752
Total	**0.0757**	**0.3246**	**0.7983**	**2.9100e-003**	**0.2423**	**3.8200e-003**	**0.2461**	**0.0651**	**3.6100e-003**	**0.0687**	**0.0000**	**273.4417**	**273.4417**	**8.2900e-003**	**0.0192**	**279.3611**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.1874	1.4750	1.4497	2.5300e-003		0.0709	0.0709		0.0680	0.0680	0.0000	209.7567	209.7567	0.0405	0.0000	210.7684
Total	**0.1874**	**1.4750**	**1.4497**	**2.5300e-003**		**0.0709**	**0.0709**		**0.0680**	**0.0680**	**0.0000**	**209.7567**	**209.7567**	**0.0405**	**0.0000**	**210.7684**

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	0.0103	0.2701	0.0896	1.0300e-003	0.0331	2.4500e-003	0.0356	9.5500e-003	2.3500e-003	0.0119	0.0000	100.2911	100.2911	3.3500e-003	0.0145	104.6859
Worker	0.0654	0.0545	0.7087	1.8800e-003	0.2092	1.3700e-003	0.2105	0.0556	1.2600e-003	0.0568	0.0000	173.1506	173.1506	4.9400e-003	4.7000e-003	174.6752
Total	**0.0757**	**0.3246**	**0.7983**	**2.9100e-003**	**0.2423**	**3.8200e-003**	**0.2461**	**0.0651**	**3.6100e-003**	**0.0687**	**0.0000**	**273.4417**	**273.4417**	**8.2900e-003**	**0.0192**	**279.3611**

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3.5 Building Construction - 2023

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	0.0154	0.1226	0.1279	2.3000e-004		5.5200e-003	5.5200e-003		5.2900e-003	5.2900e-003	0.0000	18.6932	18.6932	3.5400e-003	0.0000	18.7816
Total	**0.0154**	**0.1226**	**0.1279**	**2.3000e-004**		**5.5200e-003**	**5.5200e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**18.6932**	**18.6932**	**3.5400e-003**	**0.0000**	**18.7816**

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	5.3000e-004	0.0189	7.0600e-003	9.0000e-005	2.9500e-003	9.0000e-005	3.0400e-003	8.5000e-004	9.0000e-005	9.4000e-004	0.0000	8.5093	8.5093	2.8000e-004	1.2200e-003	8.8813
Worker	5.4000e-003	4.2900e-003	0.0581	1.6000e-004	0.0186	1.1000e-004	0.0188	4.9500e-003	1.1000e-004	5.0600e-003	0.0000	15.0228	15.0228	3.9000e-004	3.9000e-004	15.1478
Total	**5.9300e-003**	**0.0232**	**0.0652**	**2.5000e-004**	**0.0216**	**2.0000e-004**	**0.0218**	**5.8000e-003**	**2.0000e-004**	**6.0000e-003**	**0.0000**	**23.5321**	**23.5321**	**6.7000e-004**	**1.6100e-003**	**24.0291**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0154	0.1226	0.1279	2.3000e-004		5.5200e-003	5.5200e-003		5.2900e-003	5.2900e-003	0.0000	18.6932	18.6932	3.5400e-003	0.0000	18.7815
Total	**0.0154**	**0.1226**	**0.1279**	**2.3000e-004**		**5.5200e-003**	**5.5200e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**18.6932**	**18.6932**	**3.5400e-003**	**0.0000**	**18.7815**

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	5.3000e-004	0.0189	7.0600e-003	9.0000e-005	2.9500e-003	9.0000e-005	3.0400e-003	8.5000e-004	9.0000e-005	9.4000e-004	0.0000	8.5093	8.5093	2.8000e-004	1.2200e-003	8.8813
Worker	5.4000e-003	4.2900e-003	0.0581	1.6000e-004	0.0186	1.1000e-004	0.0188	4.9500e-003	1.1000e-004	5.0600e-003	0.0000	15.0228	15.0228	3.9000e-004	3.9000e-004	15.1478
Total	**5.9300e-003**	**0.0232**	**0.0652**	**2.5000e-004**	**0.0216**	**2.0000e-004**	**0.0218**	**5.8000e-003**	**2.0000e-004**	**6.0000e-003**	**0.0000**	**23.5321**	**23.5321**	**6.7000e-004**	**1.6100e-003**	**24.0291**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

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	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**2.4000e-004**	**1.9000e-004**	**2.5600e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6624**	**0.6624**	**2.0000e-005**	**2.0000e-005**	**0.6679**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

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	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**2.4000e-004**	**1.9000e-004**	**2.5600e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6624**	**0.6624**	**2.0000e-005**	**2.0000e-005**	**0.6679**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.4413					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1500e-003	7.8200e-003	0.0109	2.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.5320	1.5320	9.0000e-005	0.0000	1.5342
Total	**0.4425**	**7.8200e-003**	**0.0109**	**2.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.5320**	**1.5320**	**9.0000e-005**	**0.0000**	**1.5342**

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	7.2000e-004	5.7000e-004	7.7900e-003	2.0000e-005	2.5000e-003	2.0000e-005	2.5100e-003	6.6000e-004	1.0000e-005	6.8000e-004	0.0000	2.0136	2.0136	5.0000e-005	5.0000e-005	2.0304
Total	**7.2000e-004**	**5.7000e-004**	**7.7900e-003**	**2.0000e-005**	**2.5000e-003**	**2.0000e-005**	**2.5100e-003**	**6.6000e-004**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**2.0136**	**2.0136**	**5.0000e-005**	**5.0000e-005**	**2.0304**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.4413					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1500e-003	7.8200e-003	0.0109	2.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.5320	1.5320	9.0000e-005	0.0000	1.5342
Total	**0.4425**	**7.8200e-003**	**0.0109**	**2.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.5320**	**1.5320**	**9.0000e-005**	**0.0000**	**1.5342**

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	7.2000e-004	5.7000e-004	7.7900e-003	2.0000e-005	2.5000e-003	2.0000e-005	2.5100e-003	6.6000e-004	1.0000e-005	6.8000e-004	0.0000	2.0136	2.0136	5.0000e-005	5.0000e-005	2.0304
Total	**7.2000e-004**	**5.7000e-004**	**7.7900e-003**	**2.0000e-005**	**2.5000e-003**	**2.0000e-005**	**2.5100e-003**	**6.6000e-004**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**2.0136**	**2.0136**	**5.0000e-005**	**5.0000e-005**	**2.0304**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Unmitigated	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	162.2552	162.2552	0.0000	0.0000	162.2552
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	162.2552	162.2552	0.0000	0.0000	162.2552
NaturalGas Mitigated	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	185.4858	185.4858	3.5600e-003	3.4000e-003	186.5880
NaturalGas Unmitigated	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	185.4858	185.4858	3.5600e-003	3.4000e-003	186.5880

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.3937e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3733	74.3733	1.4300e-003	1.3600e-003	74.8152
High Turnover (Sit Down Restaurant)	775590	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.3884	41.3884	7.9000e-004	7.6000e-004	41.6344
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Strip Mall	13930	8.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7434	0.7434	1.0000e-005	1.0000e-005	0.7478
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0188**	**0.1663**	**0.1131**	**1.0200e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**185.4858**	**185.4858**	**3.5500e-003**	**3.3900e-003**	**186.5881**

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1.3937e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3733	74.3733	1.4300e-003	1.3600e-003	74.8152
High Turnover (Sit Down Restaurant)	775590	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.3884	41.3884	7.9000e-004	7.6000e-004	41.6344
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Strip Mall	13930	8.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7434	0.7434	1.0000e-005	1.0000e-005	0.7478
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0188**	**0.1663**	**0.1131**	**1.0200e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**185.4858**	**185.4858**	**3.5500e-003**	**3.3900e-003**	**186.5881**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	479229	61.0822	0.0000	0.0000	61.0822
High Turnover (Sit Down Restaurant)	106650	13.5936	0.0000	0.0000	13.5936
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Strip Mall	77910	9.9304	0.0000	0.0000	9.9304
Unenclosed Parking with Elevator	431456	54.9932	0.0000	0.0000	54.9932
Total		**162.2552**	**0.0000**	**0.0000**	**162.2552**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	479229	61.0822	0.0000	0.0000	61.0822
High Turnover (Sit Down Restaurant)	106650	13.5936	0.0000	0.0000	13.5936
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Strip Mall	77910	9.9304	0.0000	0.0000	9.9304
Unenclosed Parking with Elevator	431456	54.9932	0.0000	0.0000	54.9932
Total		**162.2552**	**0.0000**	**0.0000**	**162.2552**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.6067	0.0383	1.3066	2.2000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003	0.0000	29.1353	29.1353	2.5800e-003	5.0000e-004	29.3474
Unmitigated	1.0134	0.0474	2.0913	2.1000e-003		0.1265	0.1265		0.1265	0.1265	13.2774	27.6344	40.9118	0.0417	9.0000e-004	42.2218

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4094	0.0324	0.7946	2.0300e-003		0.1194	0.1194		0.1194	0.1194	13.2774	25.5146	38.7920	0.0396	9.0000e-004	40.0504
Landscaping	0.0395	0.0149	1.2967	7.0000e-005		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	2.1199	2.1199	2.0600e-003	0.0000	2.1714
Total	**1.0134**	**0.0474**	**2.0913**	**2.1000e-003**		**0.1265**	**0.1265**		**0.1265**	**0.1265**	**13.2774**	**27.6344**	**40.9118**	**0.0417**	**9.0000e-004**	**42.2218**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7300e-003	0.0233	9.9300e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0154	27.0154	5.2000e-004	5.0000e-004	27.1760
Landscaping	0.0395	0.0149	1.2967	7.0000e-005		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	2.1199	2.1199	2.0600e-003	0.0000	2.1714
Total	**0.6067**	**0.0383**	**1.3066**	**2.2000e-004**		**9.0500e-003**	**9.0500e-003**		**9.0500e-003**	**9.0500e-003**	**0.0000**	**29.1353**	**29.1353**	**2.5800e-003**	**5.0000e-004**	**29.3474**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	29.8661	0.3614	8.5300e-003	41.4441
Unmitigated	29.8661	0.3614	8.5300e-003	41.4441

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.14425 / 5.13442	23.3711	0.2654	6.2700e-003	31.8730
High Turnover (Sit Down Restaurant)	0.910601 / 0.0581235	1.8825	0.0297	7.0000e-004	2.8331
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Strip Mall	0.518508 / 0.317795	1.4751	0.0169	4.0000e-004	2.0163
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**29.8661**	**0.3614**	**8.5400e-003**	**41.4441**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.14425 / 5.13442	23.3711	0.2654	6.2700e-003	31.8730
High Turnover (Sit Down Restaurant)	0.910601 / 0.0581235	1.8825	0.0297	7.0000e-004	2.8331
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Strip Mall	0.518508 / 0.317795	1.4751	0.0169	4.0000e-004	2.0163
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**29.8661**	**0.3614**	**8.5400e-003**	**41.4441**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.6682	0.6305	0.0000	26.4300
Unmitigated	21.3364	1.2609	0.0000	52.8600

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	57.5	11.6720	0.6898	0.0000	28.9168
High Turnover (Sit Down Restaurant)	35.7	7.2468	0.4283	0.0000	17.9536
Quality Restaurant	4.56	0.9256	0.0547	0.0000	2.2932
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**21.3364**	**1.2609**	**0.0000**	**52.8600**

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	28.75	5.8360	0.3449	0.0000	14.4584
High Turnover (Sit Down Restaurant)	17.85	3.6234	0.2141	0.0000	8.9768
Quality Restaurant	2.28	0.4628	0.0274	0.0000	1.1466
Strip Mall	3.675	0.7460	0.0441	0.0000	1.8482
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**10.6682**	**0.6305**	**0.0000**	**26.4300**

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

Medium Scale Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project Defaults

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase -

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Area Coating - rule 1113

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	88.6059	369.4530	89.9435	1.2752	44.3180	3.2645	47.5825	13.4086	3.0960	16.5046	0.0000	139,423.9873	139,423.9873	7.9280	21.7926	146,116.3753
2023	88.5830	1.3967	3.0768	6.5300e-003	0.4248	0.0734	0.4981	0.1127	0.0732	0.1858	0.0000	645.9542	645.9542	0.0266	9.3700e-003	649.4096
Maximum	**88.6059**	**369.4530**	**89.9435**	**1.2752**	**44.3180**	**3.2645**	**47.5825**	**13.4086**	**3.0960**	**16.5046**	**0.0000**	**139,423.9873**	**139,423.9873**	**7.9280**	**21.7926**	**146,116.3753**

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					
2022	88.6059	369.4530	89.9435	1.2752	38.7110	3.2645	41.9755	11.0788	3.0960	14.1748	0.0000	139,423.9873	139,423.9873	7.9280	21.7926	146,116.3753
2023	88.5830	1.3967	3.0768	6.5300e-003	0.4248	0.0734	0.4981	0.1127	0.0732	0.1858	0.0000	645.9542	645.9542	0.0266	9.3700e-003	649.4096
Maximum	**88.6059**	**369.4530**	**89.9435**	**1.2752**	**38.7110**	**3.2645**	**41.9755**	**11.0788**	**3.0960**	**14.1748**	**0.0000**	**139,423.9873**	**139,423.9873**	**7.9280**	**21.7926**	**146,116.3753**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	12.53	0.00	11.66	17.23	0.00	13.96	0.00	0.00	0.00	0.00	0.00	0.00

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Total	**40.8922**	**8.3025**	**116.3247**	**0.2512**	**8.7112**	**9.7406**	**18.4518**	**2.3203**	**9.7360**	**12.0563**	**1,170.8648**	**11,927.0336**	**13,097.8984**	**4.1980**	**0.5073**	**13,354.0218**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Total	**8.3561**	**7.5751**	**53.5499**	**0.1009**	**8.7112**	**0.3429**	**9.0541**	**2.3203**	**0.3383**	**2.6586**	**0.0000**	**12,059.3866**	**12,059.3866**	**0.7519**	**0.4715**	**12,218.6914**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	79.57	8.76	53.97	59.82	0.00	96.48	50.93	0.00	96.52	77.95	100.00	-1.11	7.93	82.09	7.05	8.50

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					16.0794	0.0000	16.0794	2.4346	0.0000	2.4346			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**16.0794**	**0.8379**	**16.9173**	**2.4346**	**0.7829**	**3.2175**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3378	12.9850	2.9608	0.0462	1.3005	0.0929	1.3934	0.3566	0.0889	0.4454		5,059.6455	5,059.6455	0.2682	0.8028	5,305.5865
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.3860**	**13.0213**	**3.4312**	**0.0475**	**1.4458**	**0.0938**	**1.5397**	**0.3951**	**0.0897**	**0.4848**		**5,187.7128**	**5,187.7128**	**0.2719**	**0.8063**	**5,434.7823**

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					5.9574	0.0000	5.9574	0.9020	0.0000	0.9020			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**5.9574**	**0.8379**	**6.7953**	**0.9020**	**0.7829**	**1.6849**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3378	12.9850	2.9608	0.0462	1.3005	0.0929	1.3934	0.3566	0.0889	0.4454		5,059.6455	5,059.6455	0.2682	0.8028	5,305.5865
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.3860**	**13.0213**	**3.4312**	**0.0475**	**1.4458**	**0.0938**	**1.5397**	**0.3951**	**0.0897**	**0.4848**		**5,187.7128**	**5,187.7128**	**0.2719**	**0.8063**	**5,434.7823**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

3.4 Grading - 2022

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					8.9071	0.0000	8.9071	3.7010	0.0000	3.7010			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**8.9071**	**0.7423**	**9.6494**	**3.7010**	**0.6829**	**4.3839**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.1698	352.4415	80.3615	1.2536	35.2991	2.5215	37.8206	9.6779	2.4125	12.0904		137,329.9915	137,329.9915	7.2798	21.7899	144,005.3770
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**9.2069**	**352.4694**	**80.7234**	**1.2546**	**35.4109**	**2.5223**	**37.9331**	**9.7075**	**2.4131**	**12.1207**		**137,428.5049**	**137,428.5049**	**7.2826**	**21.7926**	**144,104.7584**

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					3.3001	0.0000	3.3001	1.3712	0.0000	1.3712			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.3001**	**0.7423**	**4.0424**	**1.3712**	**0.6829**	**2.0541**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.1698	352.4415	80.3615	1.2536	35.2991	2.5215	37.8206	9.6779	2.4125	12.0904		137,329.9915	137,329.9915	7.2798	21.7899	144,005.3770
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**9.2069**	**352.4694**	**80.7234**	**1.2546**	**35.4109**	**2.5223**	**37.9331**	**9.7075**	**2.4131**	**12.1207**		**137,428.5049**	**137,428.5049**	**7.2826**	**21.7926**	**144,104.7584**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1011	2.6522	0.9035	0.0102	0.3331	0.0244	0.3574	0.0959	0.0233	0.1192		1,094.8115	1,094.8115	0.0365	0.1579	1,142.7795
Worker	0.7003	0.5277	6.8394	0.0183	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,861.9017	1,861.9017	0.0539	0.0505	1,878.3074
Total	**0.8014**	**3.1799**	**7.7429**	**0.0285**	**2.4457**	**0.0379**	**2.4835**	**0.6562**	**0.0358**	**0.6919**		**2,956.7132**	**2,956.7132**	**0.0903**	**0.2084**	**3,021.0869**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1011	2.6522	0.9035	0.0102	0.3331	0.0244	0.3574	0.0959	0.0233	0.1192		1,094.8115	1,094.8115	0.0365	0.1579	1,142.7795
Worker	0.7003	0.5277	6.8394	0.0183	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,861.9017	1,861.9017	0.0539	0.0505	1,878.3074
Total	**0.8014**	**3.1799**	**7.7429**	**0.0285**	**2.4457**	**0.0379**	**2.4835**	**0.6562**	**0.0358**	**0.6919**		**2,956.7132**	**2,956.7132**	**0.0903**	**0.2084**	**3,021.0869**

3.6 Paving - 2022

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0556	0.0419	0.5428	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.7700	147.7700	4.2700e-003	4.0100e-003	149.0720
Total	**0.0556**	**0.0419**	**0.5428**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.7700**	**147.7700**	**4.2700e-003**	**4.0100e-003**	**149.0720**

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0556	0.0419	0.5428	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.7700	147.7700	4.2700e-003	4.0100e-003	149.0720
Total	**0.0556**	**0.0419**	**0.5428**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.7700**	**147.7700**	**4.2700e-003**	**4.0100e-003**	**149.0720**

3.7 Architectural Coating - 2022

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**88.4651**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1408	0.1061	1.3751	3.6800e-003	0.4248	2.7200e-003	0.4275	0.1127	2.5100e-003	0.1152		374.3506	374.3506	0.0108	0.0102	377.6491
Total	**0.1408**	**0.1061**	**1.3751**	**3.6800e-003**	**0.4248**	**2.7200e-003**	**0.4275**	**0.1127**	**2.5100e-003**	**0.1152**		**374.3506**	**374.3506**	**0.0108**	**0.0102**	**377.6491**

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**88.4651**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1408	0.1061	1.3751	3.6800e-003	0.4248	2.7200e-003	0.4275	0.1127	2.5100e-003	0.1152		374.3506	374.3506	0.0108	0.0102	377.6491
Total	**0.1408**	**0.1061**	**1.3751**	**3.6800e-003**	**0.4248**	**2.7200e-003**	**0.4275**	**0.1127**	**2.5100e-003**	**0.1152**		**374.3506**	**374.3506**	**0.0108**	**0.0102**	**377.6491**

3.7 Architectural Coating - 2023

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**88.4523**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1307	0.0937	1.2657	3.5600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		364.5062	364.5062	9.7100e-003	9.3700e-003	367.5406
Total	**0.1307**	**0.0937**	**1.2657**	**3.5600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**364.5062**	**364.5062**	**9.7100e-003**	**9.3700e-003**	**367.5406**

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**88.4523**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1307	0.0937	1.2657	3.5600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		364.5062	364.5062	9.7100e-003	9.3700e-003	367.5406
Total	**0.1307**	**0.0937**	**1.2657**	**3.5600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**364.5062**	**364.5062**	**9.7100e-003**	**9.3700e-003**	**367.5406**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294
Unmitigated	4.6263	4.6783	41.7630	0.0829	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,537.9939	8,537.9939	0.6666	0.4073	8,676.0294

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
NaturalGas Unmitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	3818.36	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2124.9	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	38.1644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.81836	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2.1249	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	0.0381644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Unmitigated	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	32.7545	2.5935	63.5690	0.1622		9.5485	9.5485		9.5485	9.5485	1,170.8648	2,250.0000	3,420.8648	3.4917	0.0795	3,531.8405
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**36.1632**	**2.7130**	**73.9422**	**0.1627**		**9.6058**	**9.6058**		**9.6058**	**9.6058**	**1,170.8648**	**2,268.6940**	**3,439.5588**	**3.5099**	**0.0795**	**3,550.9891**

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2184	1.8662	0.7941	0.0119		0.1509	0.1509		0.1509	0.1509	0.0000	2,382.3529	2,382.3529	0.0457	0.0437	2,396.5101
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**3.6271**	**1.9856**	**11.1674**	**0.0125**		**0.2082**	**0.2082**		**0.2082**	**0.2082**	**0.0000**	**2,401.0469**	**2,401.0469**	**0.0638**	**0.0437**	**2,415.6587**

7.0 Water Detail

7.1 Mitigation Measures Water

Medium Scale Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project Defaults

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase -

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Area Coating - rule 1113

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	88.5967	355.7057	88.5858	1.2749	44.3180	3.2593	47.5773	13.4086	3.0910	16.4996	0.0000	139,389.2401	139,389.2401	7.9402	21.7853	146,079.7616
2023	88.5739	1.3878	3.1881	6.7300e-003	0.4248	0.0734	0.4981	0.1127	0.0732	0.1858	0.0000	666.2409	666.2409	0.0264	8.7700e-003	669.5149
Maximum	**88.5967**	**355.7057**	**88.5858**	**1.2749**	**44.3180**	**3.2593**	**47.5773**	**13.4086**	**3.0910**	**16.4996**	**0.0000**	**139,389.2401**	**139,389.2401**	**7.9402**	**21.7853**	**146,079.7616**

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					
2022	88.5967	355.7057	88.5858	1.2749	38.7110	3.2593	41.9703	11.0788	3.0910	14.1698	0.0000	139,389.2401	139,389.2401	7.9402	21.7853	146,079.7616
2023	88.5739	1.3878	3.1881	6.7300e-003	0.4248	0.0734	0.4981	0.1127	0.0732	0.1858	0.0000	666.2409	666.2409	0.0264	8.7700e-003	669.5149
Maximum	**88.5967**	**355.7057**	**88.5858**	**1.2749**	**38.7110**	**3.2593**	**41.9703**	**11.0788**	**3.0910**	**14.1698**	**0.0000**	**139,389.2401**	**139,389.2401**	**7.9402**	**21.7853**	**146,079.7616**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	12.53	0.00	11.66	17.23	0.00	13.96	0.00	0.00	0.00	0.00	0.00	0.00

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Total	**41.0016**	**7.9524**	**116.7006**	**0.2549**	**8.7112**	**9.7406**	**18.4518**	**2.3203**	**9.7360**	**12.0563**	**1,170.8648**	**12,302.5149**	**13,473.3797**	**4.1720**	**0.4891**	**13,723.4397**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Energy	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
Mobile	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Total	**8.4655**	**7.2251**	**53.9257**	**0.1046**	**8.7112**	**0.3429**	**9.0541**	**2.3203**	**0.3383**	**2.6586**	**0.0000**	**12,434.8679**	**12,434.8679**	**0.7260**	**0.4533**	**12,588.1093**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	79.35	9.15	53.79	58.96	0.00	96.48	50.93	0.00	96.53	77.95	100.00	-1.08	7.71	82.60	7.32	8.27

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					16.0794	0.0000	16.0794	2.4346	0.0000	2.4346			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**16.0794**	**0.8379**	**16.9173**	**2.4346**	**0.7829**	**3.2175**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3462	12.4786	2.9095	0.0462	1.3005	0.0927	1.3932	0.3566	0.0887	0.4453		5,058.1627	5,058.1627	0.2687	0.8025	5,304.0369
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.3912**	**12.5115**	**3.4219**	**0.0475**	**1.4458**	**0.0936**	**1.5395**	**0.3951**	**0.0896**	**0.4847**		**5,193.3792**	**5,193.3792**	**0.2723**	**0.8058**	**5,440.3143**

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					5.9574	0.0000	5.9574	0.9020	0.0000	0.9020			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**5.9574**	**0.8379**	**6.7953**	**0.9020**	**0.7829**	**1.6849**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3462	12.4786	2.9095	0.0462	1.3005	0.0927	1.3932	0.3566	0.0887	0.4453		5,058.1627	5,058.1627	0.2687	0.8025	5,304.0369
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.3912**	**12.5115**	**3.4219**	**0.0475**	**1.4458**	**0.0936**	**1.5395**	**0.3951**	**0.0896**	**0.4847**		**5,193.3792**	**5,193.3792**	**0.2723**	**0.8058**	**5,440.3143**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

3.4 Grading - 2022

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					8.9071	0.0000	8.9071	3.7010	0.0000	3.7010			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**8.9071**	**0.7423**	**9.6494**	**3.7010**	**0.6829**	**4.3839**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.3955	338.6968	78.9715	1.2533	35.2991	2.5163	37.8154	9.6779	2.4075	12.0854		137,289.7450	137,289.7450	7.2920	21.7828	143,963.3159
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**9.4301**	**338.7221**	**79.3656**	**1.2543**	**35.4109**	**2.5171**	**37.9279**	**9.7075**	**2.4081**	**12.1157**		**137,393.7577**	**137,393.7577**	**7.2949**	**21.7853**	**144,068.1446**

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					3.3001	0.0000	3.3001	1.3712	0.0000	1.3712			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.3001**	**0.7423**	**4.0424**	**1.3712**	**0.6829**	**2.0541**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.3955	338.6968	78.9715	1.2533	35.2991	2.5163	37.8154	9.6779	2.4075	12.0854		137,289.7450	137,289.7450	7.2920	21.7828	143,963.3159
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**9.4301**	**338.7221**	**79.3656**	**1.2543**	**35.4109**	**2.5171**	**37.9279**	**9.7075**	**2.4081**	**12.1157**		**137,393.7577**	**137,393.7577**	**7.2949**	**21.7853**	**144,068.1446**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1023	2.5472	0.8733	0.0102	0.3331	0.0243	0.3573	0.0959	0.0232	0.1191		1,094.4003	1,094.4003	0.0366	0.1577	1,142.3107
Worker	0.6541	0.4776	7.4491	0.0193	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,965.8402	1,965.8402	0.0532	0.0473	1,981.2639
Total	**0.7564**	**3.0248**	**8.3224**	**0.0295**	**2.4457**	**0.0378**	**2.4835**	**0.6562**	**0.0357**	**0.6918**		**3,060.2405**	**3,060.2405**	**0.0898**	**0.2050**	**3,123.5747**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1023	2.5472	0.8733	0.0102	0.3331	0.0243	0.3573	0.0959	0.0232	0.1191		1,094.4003	1,094.4003	0.0366	0.1577	1,142.3107
Worker	0.6541	0.4776	7.4491	0.0193	2.1126	0.0135	2.1261	0.5603	0.0125	0.5727		1,965.8402	1,965.8402	0.0532	0.0473	1,981.2639
Total	**0.7564**	**3.0248**	**8.3224**	**0.0295**	**2.4457**	**0.0378**	**2.4835**	**0.6562**	**0.0357**	**0.6918**		**3,060.2405**	**3,060.2405**	**0.0898**	**0.2050**	**3,123.5747**

3.6 Paving - 2022

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0519	0.0379	0.5912	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		156.0191	156.0191	4.2200e-003	3.7500e-003	157.2432
Total	**0.0519**	**0.0379**	**0.5912**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**156.0191**	**156.0191**	**4.2200e-003**	**3.7500e-003**	**157.2432**

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0519	0.0379	0.5912	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		156.0191	156.0191	4.2200e-003	3.7500e-003	157.2432
Total	**0.0519**	**0.0379**	**0.5912**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**156.0191**	**156.0191**	**4.2200e-003**	**3.7500e-003**	**157.2432**

3.7 Architectural Coating - 2022

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**88.4651**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1315	0.0960	1.4977	3.8900e-003	0.4248	2.7200e-003	0.4275	0.1127	2.5100e-003	0.1152		395.2483	395.2483	0.0107	9.5100e-003	398.3494
Total	**0.1315**	**0.0960**	**1.4977**	**3.8900e-003**	**0.4248**	**2.7200e-003**	**0.4275**	**0.1127**	**2.5100e-003**	**0.1152**		**395.2483**	**395.2483**	**0.0107**	**9.5100e-003**	**398.3494**

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**88.4651**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1315	0.0960	1.4977	3.8900e-003	0.4248	2.7200e-003	0.4275	0.1127	2.5100e-003	0.1152		395.2483	395.2483	0.0107	9.5100e-003	398.3494
Total	**0.1315**	**0.0960**	**1.4977**	**3.8900e-003**	**0.4248**	**2.7200e-003**	**0.4275**	**0.1127**	**2.5100e-003**	**0.1152**		**395.2483**	**395.2483**	**0.0107**	**9.5100e-003**	**398.3494**

3.7 Architectural Coating - 2023

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**88.4523**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1217	0.0848	1.3770	3.7600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		384.7929	384.7929	9.5800e-003	8.7700e-003	387.6459
Total	**0.1217**	**0.0848**	**1.3770**	**3.7600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**384.7929**	**384.7929**	**9.5800e-003**	**8.7700e-003**	**387.6459**

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	88.2606					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**88.4523**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.1217	0.0848	1.3770	3.7600e-003	0.4248	2.5600e-003	0.4273	0.1127	2.3600e-003	0.1150		384.7929	384.7929	9.5800e-003	8.7700e-003	387.6459
Total	**0.1217**	**0.0848**	**1.3770**	**3.7600e-003**	**0.4248**	**2.5600e-003**	**0.4273**	**0.1127**	**2.3600e-003**	**0.1150**		**384.7929**	**384.7929**	**9.5800e-003**	**8.7700e-003**	**387.6459**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472
Unmitigated	4.7357	4.3283	42.1388	0.0866	8.7112	0.0638	8.7750	2.3203	0.0592	2.3795		8,913.4752	8,913.4752	0.6406	0.3891	9,045.4472

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033
NaturalGas Unmitigated	0.1027	0.9112	0.6195	5.6000e-003		0.0710	0.0710		0.0710	0.0710		1,120.3457	1,120.3457	0.0215	0.0205	1,127.0033

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	3818.36	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2124.9	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	38.1644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.81836	0.0412	0.3519	0.1497	2.2500e-003		0.0285	0.0285		0.0285	0.0285		449.2192	449.2192	8.6100e-003	8.2400e-003	451.8887
High Turnover (Sit Down Restaurant)	2.1249	0.0229	0.2083	0.1750	1.2500e-003		0.0158	0.0158		0.0158	0.0158		249.9887	249.9887	4.7900e-003	4.5800e-003	251.4743
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Strip Mall	0.0381644	4.1000e-004	3.7400e-003	3.1400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4899	4.4899	9.0000e-005	8.0000e-005	4.5166
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1027**	**0.9112**	**0.6195**	**5.6000e-003**		**0.0710**	**0.0710**		**0.0710**	**0.0710**		**1,120.3457**	**1,120.3457**	**0.0215**	**0.0205**	**1,127.0033**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6271	1.9856	11.1674	0.0125		0.2082	0.2082		0.2082	0.2082	0.0000	2,401.0469	2,401.0469	0.0639	0.0437	2,415.6587
Unmitigated	36.1632	2.7130	73.9422	0.1627		9.6058	9.6058		9.6058	9.6058	1,170.8648	2,268.6940	3,439.5588	3.5099	0.0795	3,550.9891

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	32.7545	2.5935	63.5690	0.1622		9.5485	9.5485		9.5485	9.5485	1,170.8648	2,250.0000	3,420.8648	3.4917	0.0795	3,531.8405
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**36.1632**	**2.7130**	**73.9422**	**0.1627**		**9.6058**	**9.6058**		**9.6058**	**9.6058**	**1,170.8648**	**2,268.6940**	**3,439.5588**	**3.5099**	**0.0795**	**3,550.9891**

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2418					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8508					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2184	1.8662	0.7941	0.0119		0.1509	0.1509		0.1509	0.1509	0.0000	2,382.3529	2,382.3529	0.0457	0.0437	2,396.5101
Landscaping	0.3162	0.1194	10.3733	5.5000e-004		0.0573	0.0573		0.0573	0.0573		18.6940	18.6940	0.0182		19.1486
Total	**3.6271**	**1.9856**	**11.1674**	**0.0125**		**0.2082**	**0.2082**		**0.2082**	**0.2082**	**0.0000**	**2,401.0469**	**2,401.0469**	**0.0638**	**0.0437**	**2,415.6587**

7.0 Water Detail

7.1 Mitigation Measures Water

Medium Scale Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Medium Scale Project Defaults

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	556.00	Space	0.00	222,400.00	0
High Turnover (Sit Down Restaurant)	3.00	1000sqft	0.07	3,000.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0
Apartments Mid Rise	125.00	Dwelling Unit	2.66	125,000.00	358
Strip Mall	7.00	1000sqft	0.16	7,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - Total of 3 acre lot
parking is 2-level subterrane

Construction Phase -

Demolition - 3acre lot size with 2.5 FAR

Grading - two-level subterrane, 20 feet depth * 3 acre

Architectural Coating - rule 1113

Area Coating - rule 1113

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - Rule 445
rule 1113

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	5.00	0.00
tblLandUse	LotAcreage	3.29	2.66
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3913	3.4503	2.9677	0.0106	0.5736	0.1039	0.6774	0.1395	0.0991	0.2386	0.0000	985.8718	985.8718	0.0861	0.0875	1,014.1037
2023	0.3986	6.2900e-003	0.0140	3.0000e-005	1.8700e-003	3.3000e-004	2.2000e-003	5.0000e-004	3.3000e-004	8.3000e-004	0.0000	2.6592	2.6592	1.1000e-004	4.0000e-005	2.6735
Maximum	**0.3986**	**3.4503**	**2.9677**	**0.0106**	**0.5736**	**0.1039**	**0.6774**	**0.1395**	**0.0991**	**0.2386**	**0.0000**	**985.8718**	**985.8718**	**0.0861**	**0.0875**	**1,014.1037**

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					
2022	0.3913	3.4503	2.9677	0.0106	0.4540	0.1039	0.5579	0.1170	0.0991	0.2161	0.0000	985.8715	985.8715	0.0861	0.0875	1,014.1034
2023	0.3986	6.2900e-003	0.0140	3.0000e-005	1.8700e-003	3.3000e-004	2.2000e-003	5.0000e-004	3.3000e-004	8.3000e-004	0.0000	2.6592	2.6592	1.1000e-004	4.0000e-005	2.6735
Maximum	**0.3986**	**3.4503**	**2.9677**	**0.0106**	**0.4540**	**0.1039**	**0.5579**	**0.1170**	**0.0991**	**0.2161**	**0.0000**	**985.8715**	**985.8715**	**0.0861**	**0.0875**	**1,014.1034**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**20.77**	**0.00**	**17.59**	**16.05**	**0.00**	**9.39**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2022**	**3-31-2022**	1.7917	1.7917
2	**4-1-2022**	**6-30-2022**	0.6578	0.6578
3	**7-1-2022**	**9-30-2022**	0.6651	0.6651
4	**10-1-2022**	**12-31-2022**	0.6710	0.6710
5	**1-1-2023**	**3-31-2023**	0.3856	0.3856
		Highest	1.7917	1.7917

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	1.0134	0.0474	2.0913	2.1000e-003		0.1265	0.1265		0.1265	0.1265	13.2774	27.6344	40.9118	0.0417	9.0000e-004	42.2218
Energy	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	347.7410	347.7410	3.5600e-003	3.4000e-003	348.8433
Mobile	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Waste						0.0000	0.0000		0.0000	0.0000	21.3364	0.0000	21.3364	1.2609	0.0000	52.8600
Water						0.0000	0.0000		0.0000	0.0000	3.5187	26.3475	29.8661	0.3614	8.5300e-003	41.4441
Total	**1.7872**	**1.0058**	**9.2442**	**0.0172**	**1.4361**	**0.1502**	**1.5863**	**0.3831**	**0.1494**	**0.5325**	**38.1324**	**1,717.1661**	**1,755.2986**	**1.7680**	**0.0749**	**1,821.8295**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6067	0.0383	1.3066	2.2000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003	0.0000	29.1353	29.1353	2.5800e-003	5.0000e-004	29.3474
Energy	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	347.7410	347.7410	3.5600e-003	3.4000e-003	348.8433
Mobile	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Waste						0.0000	0.0000		0.0000	0.0000	10.6682	0.0000	10.6682	0.6305	0.0000	26.4300
Water						0.0000	0.0000		0.0000	0.0000	3.5187	26.3475	29.8661	0.3614	8.5300e-003	41.4441
Total	**1.3805**	**0.9968**	**8.4595**	**0.0153**	**1.4361**	**0.0327**	**1.4688**	**0.3831**	**0.0319**	**0.4150**	**14.1869**	**1,718.6670**	**1,732.8539**	**1.0984**	**0.0745**	**1,782.5251**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.76**	**0.90**	**8.49**	**10.93**	**0.00**	**78.23**	**7.41**	**0.00**	**78.63**	**22.06**	**62.80**	**-0.09**	**1.28**	**37.87**	**0.53**	**2.16**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 253,125; Residential Outdoor: 84,375; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 13,344 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	189.00	52.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	38.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.1608	0.0000	0.1608	0.0244	0.0000	0.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.1608**	**8.3800e-003**	**0.1692**	**0.0244**	**7.8300e-003**	**0.0322**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**3.8800e-003**	**0.1318**	**0.0341**	**4.7000e-004**	**0.0142**	**9.4000e-004**	**0.0151**	**3.8900e-003**	**9.0000e-004**	**4.7900e-003**	**0.0000**	**47.0717**	**47.0717**	**2.4700e-003**	**7.3100e-003**	**49.3129**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.0596	0.0000	0.0596	9.0200e-003	0.0000	9.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.0596**	**8.3800e-003**	**0.0680**	**9.0200e-003**	**7.8300e-003**	**0.0169**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**3.8800e-003**	**0.1318**	**0.0341**	**4.7000e-004**	**0.0142**	**9.4000e-004**	**0.0151**	**3.8900e-003**	**9.0000e-004**	**4.7900e-003**	**0.0000**	**47.0717**	**47.0717**	**2.4700e-003**	**7.3100e-003**	**49.3129**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					8.8000e-004	0.0000	8.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**8.8000e-004**	**8.9000e-004**	**1.7700e-003**	**1.0000e-004**	**8.2000e-004**	**9.2000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0267	0.0000	0.0267	0.0111	0.0000	0.0111	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0267**	**2.2300e-003**	**0.0290**	**0.0111**	**2.0500e-003**	**0.0132**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2721	0.2721	1.0000e-005	1.0000e-005	0.2745
Total	**0.0280**	**1.0703**	**0.2397**	**3.7600e-003**	**0.1044**	**7.5600e-003**	**0.1120**	**0.0287**	**7.2300e-003**	**0.0359**	**0.0000**	**373.9595**	**373.9595**	**0.0198**	**0.0593**	**392.1270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					9.9000e-003	0.0000	9.9000e-003	4.1100e-003	0.0000	4.1100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**9.9000e-003**	**2.2300e-003**	**0.0121**	**4.1100e-003**	**2.0500e-003**	**6.1600e-003**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2721	0.2721	1.0000e-005	1.0000e-005	0.2745
Total	**0.0280**	**1.0703**	**0.2397**	**3.7600e-003**	**0.1044**	**7.5600e-003**	**0.1120**	**0.0287**	**7.2300e-003**	**0.0359**	**0.0000**	**373.9595**	**373.9595**	**0.0198**	**0.0593**	**392.1270**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4481	228.4481	0.0441	0.0000	229.5500
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4481**	**228.4481**	**0.0441**	**0.0000**	**229.5500**

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	0.0112	0.2941	0.0976	1.1200e-003	0.0361	2.6700e-003	0.0387	0.0104	2.5600e-003	0.0130	0.0000	109.2279	109.2279	3.6500e-003	0.0158	114.0143
Worker	0.0712	0.0594	0.7718	2.0400e-003	0.2278	1.4900e-003	0.2293	0.0605	1.3700e-003	0.0619	0.0000	188.5798	188.5798	5.3800e-003	5.1200e-003	190.2403
Total	**0.0824**	**0.3535**	**0.8694**	**3.1600e-003**	**0.2639**	**4.1600e-003**	**0.2680**	**0.0709**	**3.9300e-003**	**0.0748**	**0.0000**	**297.8078**	**297.8078**	**9.0300e-003**	**0.0209**	**304.2546**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4478	228.4478	0.0441	0.0000	229.5497
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4478**	**228.4478**	**0.0441**	**0.0000**	**229.5497**

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	0.0112	0.2941	0.0976	1.1200e-003	0.0361	2.6700e-003	0.0387	0.0104	2.5600e-003	0.0130	0.0000	109.2279	109.2279	3.6500e-003	0.0158	114.0143
Worker	0.0712	0.0594	0.7718	2.0400e-003	0.2278	1.4900e-003	0.2293	0.0605	1.3700e-003	0.0619	0.0000	188.5798	188.5798	5.3800e-003	5.1200e-003	190.2403
Total	**0.0824**	**0.3535**	**0.8694**	**3.1600e-003**	**0.2639**	**4.1600e-003**	**0.2680**	**0.0709**	**3.9300e-003**	**0.0748**	**0.0000**	**297.8078**	**297.8078**	**9.0300e-003**	**0.0209**	**304.2546**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6803	0.6803	2.0000e-005	2.0000e-005	0.6863
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6803**	**0.6803**	**2.0000e-005**	**2.0000e-005**	**0.6863**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6803	0.6803	2.0000e-005	2.0000e-005	0.6863
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6803**	**0.6803**	**2.0000e-005**	**2.0000e-005**	**0.6863**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0442**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

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	7.0000e-005	5.0000e-005	7.1000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1723	0.1723	0.0000	0.0000	0.1739
Total	**7.0000e-005**	**5.0000e-005**	**7.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1723**	**0.1723**	**0.0000**	**0.0000**	**0.1739**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0442**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

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	7.0000e-005	5.0000e-005	7.1000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1723	0.1723	0.0000	0.0000	0.1739
Total	**7.0000e-005**	**5.0000e-005**	**7.1000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1723**	**0.1723**	**0.0000**	**0.0000**	**0.1739**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.3972					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.3980**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.3000e-004	5.8400e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8900e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5102	1.5102	4.0000e-005	4.0000e-005	1.5228
Total	**5.4000e-004**	**4.3000e-004**	**5.8400e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8900e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5102**	**1.5102**	**4.0000e-005**	**4.0000e-005**	**1.5228**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.3972					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.3980**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.3000e-004	5.8400e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8900e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5102	1.5102	4.0000e-005	4.0000e-005	1.5228
Total	**5.4000e-004**	**4.3000e-004**	**5.8400e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8900e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5102**	**1.5102**	**4.0000e-005**	**4.0000e-005**	**1.5228**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603
Unmitigated	0.7552	0.7922	7.0398	0.0141	1.4361	0.0107	1.4468	0.3831	9.9200e-003	0.3930	0.0000	1,315.4433	1,315.4433	0.1004	0.0621	1,336.4603

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	680.00	613.75	511.25	2,208,945	2,208,945
High Turnover (Sit Down Restaurant)	336.54	367.20	427.92	482,407	482,407
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Strip Mall	310.24	294.28	143.01	540,470	540,470
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,745.98	1,725.43	1,442.03	3,822,842	3,822,842

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
High Turnover (Sit Down Restaurant)	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Strip Mall	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	162.2552	162.2552	0.0000	0.0000	162.2552
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	162.2552	162.2552	0.0000	0.0000	162.2552
NaturalGas Mitigated	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	185.4858	185.4858	3.5600e-003	3.4000e-003	186.5880
NaturalGas Unmitigated	0.0187	0.1663	0.1131	1.0200e-003		0.0130	0.0130		0.0130	0.0130	0.0000	185.4858	185.4858	3.5600e-003	3.4000e-003	186.5880

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.3937e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3733	74.3733	1.4300e-003	1.3600e-003	74.8152
High Turnover (Sit Down Restaurant)	775590	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.3884	41.3884	7.9000e-004	7.6000e-004	41.6344
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Strip Mall	13930	8.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7434	0.7434	1.0000e-005	1.0000e-005	0.7478
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0188**	**0.1663**	**0.1131**	**1.0200e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**185.4858**	**185.4858**	**3.5500e-003**	**3.3900e-003**	**186.5881**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Apartments Mid Rise	1.3937e+006	7.5200e-003	0.0642	0.0273	4.1000e-004		5.1900e-003	5.1900e-003		5.1900e-003	5.1900e-003	0.0000	74.3733	74.3733	1.4300e-003	1.3600e-003	74.8152
High Turnover (Sit Down Restaurant)	775590	4.1800e-003	0.0380	0.0319	2.3000e-004		2.8900e-003	2.8900e-003		2.8900e-003	2.8900e-003	0.0000	41.3884	41.3884	7.9000e-004	7.6000e-004	41.6344
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Strip Mall	13930	8.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7434	0.7434	1.0000e-005	1.0000e-005	0.7478
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0188**	**0.1663**	**0.1131**	**1.0200e-003**		**0.0130**	**0.0130**		**0.0130**	**0.0130**	**0.0000**	**185.4858**	**185.4858**	**3.5500e-003**	**3.3900e-003**	**186.5881**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	479229	61.0822	0.0000	0.0000	61.0822
High Turnover (Sit Down Restaurant)	106650	13.5936	0.0000	0.0000	13.5936
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Strip Mall	77910	9.9304	0.0000	0.0000	9.9304
Unenclosed Parking with Elevator	431456	54.9932	0.0000	0.0000	54.9932
Total		**162.2552**	**0.0000**	**0.0000**	**162.2552**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	479229	61.0822	0.0000	0.0000	61.0822
High Turnover (Sit Down Restaurant)	106650	13.5936	0.0000	0.0000	13.5936
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Strip Mall	77910	9.9304	0.0000	0.0000	9.9304
Unenclosed Parking with Elevator	431456	54.9932	0.0000	0.0000	54.9932
Total		**162.2552**	**0.0000**	**0.0000**	**162.2552**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.6067	0.0383	1.3066	2.2000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003	0.0000	29.1353	29.1353	2.5800e-003	5.0000e-004	29.3474
Unmitigated	1.0134	0.0474	2.0913	2.1000e-003		0.1265	0.1265		0.1265	0.1265	13.2774	27.6344	40.9118	0.0417	9.0000e-004	42.2218

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.4094	0.0324	0.7946	2.0300e-003		0.1194	0.1194		0.1194	0.1194	13.2774	25.5146	38.7920	0.0396	9.0000e-004	40.0504
Landscaping	0.0395	0.0149	1.2967	7.0000e-005		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	2.1199	2.1199	2.0600e-003	0.0000	2.1714
Total	**1.0134**	**0.0474**	**2.0913**	**2.1000e-003**		**0.1265**	**0.1265**		**0.1265**	**0.1265**	**13.2774**	**27.6344**	**40.9118**	**0.0417**	**9.0000e-004**	**42.2218**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0441					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5203					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.7300e-003	0.0233	9.9300e-003	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.0154	27.0154	5.2000e-004	5.0000e-004	27.1760
Landscaping	0.0395	0.0149	1.2967	7.0000e-005		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	2.1199	2.1199	2.0600e-003	0.0000	2.1714
Total	**0.6067**	**0.0383**	**1.3066**	**2.2000e-004**		**9.0500e-003**	**9.0500e-003**		**9.0500e-003**	**9.0500e-003**	**0.0000**	**29.1353**	**29.1353**	**2.5800e-003**	**5.0000e-004**	**29.3474**

7.0 Water Detail

7.1 Mitigation Measures Water

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	29.8661	0.3614	8.5300e-003	41.4441
Unmitigated	29.8661	0.3614	8.5300e-003	41.4441

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.14425 / 5.13442	23.3711	0.2654	6.2700e-003	31.8730
High Turnover (Sit Down Restaurant)	0.910601 / 0.0581235	1.8825	0.0297	7.0000e-004	2.8331
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Strip Mall	0.518508 / 0.317795	1.4751	0.0169	4.0000e-004	2.0163
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**29.8661**	**0.3614**	**8.5400e-003**	**41.4441**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.14425 / 5.13442	23.3711	0.2654	6.2700e-003	31.8730
High Turnover (Sit Down Restaurant)	0.910601 / 0.0581235	1.8825	0.0297	7.0000e-004	2.8331
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Strip Mall	0.518508 / 0.317795	1.4751	0.0169	4.0000e-004	2.0163
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**29.8661**	**0.3614**	**8.5400e-003**	**41.4441**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.6682	0.6305	0.0000	26.4300
Unmitigated	21.3364	1.2609	0.0000	52.8600

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	57.5	11.6720	0.6898	0.0000	28.9168
High Turnover (Sit Down Restaurant)	35.7	7.2468	0.4283	0.0000	17.9536
Quality Restaurant	4.56	0.9256	0.0547	0.0000	2.2932
Strip Mall	7.35	1.4920	0.0882	0.0000	3.6963
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**21.3364**	**1.2609**	**0.0000**	**52.8600**

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	28.75	5.8360	0.3449	0.0000	14.4584
High Turnover (Sit Down Restaurant)	17.85	3.6234	0.2141	0.0000	8.9768
Quality Restaurant	2.28	0.4628	0.0274	0.0000	1.1466
Strip Mall	3.675	0.7460	0.0441	0.0000	1.8482
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**10.6682**	**0.6305**	**0.0000**	**26.4300**

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

Medium Scale Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C
Hotel Representative Project Emissions Data

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase - increase duration of demolition phase to decrease PM10 to meet LST threshold
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 1113
rule 445

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.6935	98.3442	28.1270	0.3109	15.7614	1.3249	17.0862	5.7515	1.2403	6.9918	0.0000	33,785.5323	33,785.5323	2.3282	5.0311	35,343.0084
2023	73.6667	15.9465	19.2115	0.0463	1.7398	0.6319	2.3717	0.4687	0.6052	1.0739	0.0000	4,510.8428	4,510.8428	0.5458	0.1757	4,575.6628
Maximum	**73.6667**	**98.3442**	**28.1270**	**0.3109**	**15.7614**	**1.3249**	**17.0862**	**5.7515**	**1.2403**	**6.9918**	**0.0000**	**33,785.5323**	**33,785.5323**	**2.3282**	**5.0311**	**35,343.0084**

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					
2022	3.6935	98.3442	28.1270	0.3109	11.0378	1.3249	12.3627	3.5555	1.2403	4.7958	0.0000	33,785.5323	33,785.5323	2.3282	5.0311	35,343.0084
2023	73.6667	15.9465	19.2115	0.0463	1.7398	0.6319	2.3717	0.4687	0.6052	1.0739	0.0000	4,510.8428	4,510.8428	0.5458	0.1757	4,575.6628
Maximum	**73.6667**	**98.3442**	**28.1270**	**0.3109**	**11.0378**	**1.3249**	**12.3627**	**3.5555**	**1.2403**	**4.7958**	**0.0000**	**33,785.5323**	**33,785.5323**	**2.3282**	**5.0311**	**35,343.0084**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	26.99	0.00	24.28	35.30	0.00	27.23	0.00	0.00	0.00	0.00	0.00	0.00

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Total	**7.8169**	**5.6009**	**33.8012**	**0.0749**	**6.5986**	**0.2010**	**6.7995**	**1.7576**	**0.1975**	**1.9550**		**8,882.1765**	**8,882.1765**	**0.5615**	**0.3575**	**9,002.7384**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Total	**7.8169**	**5.6009**	**33.8012**	**0.0749**	**6.5986**	**0.2010**	**6.7995**	**1.7576**	**0.1975**	**1.9550**		**8,882.1765**	**8,882.1765**	**0.5615**	**0.3575**	**9,002.7384**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	
4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					11.0893	0.0000	11.0893	1.6790	0.0000	1.6790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**11.0893**	**0.8379**	**11.9272**	**1.6790**	**0.7829**	**2.4619**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2330	8.9552	2.0419	0.0319	0.8969	0.0641	0.9610	0.2459	0.0613	0.3072		3,489.4107	3,489.4107	0.1850	0.5537	3,659.0252
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.2812**	**8.9915**	**2.5123**	**0.0331**	**1.0422**	**0.0650**	**1.1072**	**0.2845**	**0.0622**	**0.3466**		**3,617.4780**	**3,617.4780**	**0.1887**	**0.5571**	**3,788.2210**

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					4.1086	0.0000	4.1086	0.6221	0.0000	0.6221			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**4.1086**	**0.8379**	**4.9465**	**0.6221**	**0.7829**	**1.4050**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2330	8.9552	2.0419	0.0319	0.8969	0.0641	0.9610	0.2459	0.0613	0.3072		3,489.4107	3,489.4107	0.1850	0.5537	3,659.0252
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.2812**	**8.9915**	**2.5123**	**0.0331**	**1.0422**	**0.0650**	**1.1072**	**0.2845**	**0.0622**	**0.3466**		**3,617.4780**	**3,617.4780**	**0.1887**	**0.5571**	**3,788.2210**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.5036	0.0000	7.5036	3.4885	0.0000	3.4885			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.5036**	**0.7423**	**8.2459**	**3.4885**	**0.6829**	**4.1714**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1161	81.3327	18.5450	0.2893	8.1459	0.5819	8.7278	2.2334	0.5567	2.7901		31,691.5365	31,691.5365	1.6800	5.0284	33,232.0101
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**2.1532**	**81.3606**	**18.9068**	**0.2903**	**8.2577**	**0.5826**	**8.8403**	**2.2630**	**0.5574**	**2.8204**		**31,790.0498**	**31,790.0498**	**1.6828**	**5.0311**	**33,331.3914**

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					2.7801	0.0000	2.7801	1.2925	0.0000	1.2925			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7801**	**0.7423**	**3.5224**	**1.2925**	**0.6829**	**1.9754**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1161	81.3327	18.5450	0.2893	8.1459	0.5819	8.7278	2.2334	0.5567	2.7901		31,691.5365	31,691.5365	1.6800	5.0284	33,232.0101
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**2.1532**	**81.3606**	**18.9068**	**0.2903**	**8.2577**	**0.5826**	**8.8403**	**2.2630**	**0.5574**	**2.8204**		**31,790.0498**	**31,790.0498**	**1.6828**	**5.0311**	**33,331.3914**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0972	2.5502	0.8688	9.8000e-003	0.3203	0.0234	0.3437	0.0922	0.0224	0.1146		1,052.7033	1,052.7033	0.0351	0.1518	1,098.8265
Worker	0.4706	0.3546	4.5958	0.0123	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,251.1191	1,251.1191	0.0362	0.0340	1,262.1431
Total	**0.5678**	**2.9048**	**5.4646**	**0.0221**	**1.7398**	**0.0325**	**1.7723**	**0.4687**	**0.0308**	**0.4995**		**2,303.8225**	**2,303.8225**	**0.0713**	**0.1858**	**2,360.9695**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0972	2.5502	0.8688	9.8000e-003	0.3203	0.0234	0.3437	0.0922	0.0224	0.1146		1,052.7033	1,052.7033	0.0351	0.1518	1,098.8265
Worker	0.4706	0.3546	4.5958	0.0123	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,251.1191	1,251.1191	0.0362	0.0340	1,262.1431
Total	**0.5678**	**2.9048**	**5.4646**	**0.0221**	**1.7398**	**0.0325**	**1.7723**	**0.4687**	**0.0308**	**0.4995**		**2,303.8225**	**2,303.8225**	**0.0713**	**0.1858**	**2,360.9695**

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0556	2.0094	0.7669	9.3200e-003	0.3203	9.7100e-003	0.3300	0.0922	9.2900e-003	0.1015		1,003.1015	1,003.1015	0.0334	0.1444	1,046.9555
Worker	0.4370	0.3132	4.2301	0.0119	1.4196	8.5700e-003	1.4281	0.3765	7.8900e-003	0.3844		1,218.2179	1,218.2179	0.0325	0.0313	1,228.3594
Total	**0.4925**	**2.3225**	**4.9970**	**0.0212**	**1.7398**	**0.0183**	**1.7581**	**0.4687**	**0.0172**	**0.4859**		**2,221.3194**	**2,221.3194**	**0.0659**	**0.1757**	**2,275.3149**

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0556	2.0094	0.7669	9.3200e-003	0.3203	9.7100e-003	0.3300	0.0922	9.2900e-003	0.1015		1,003.1015	1,003.1015	0.0334	0.1444	1,046.9555
Worker	0.4370	0.3132	4.2301	0.0119	1.4196	8.5700e-003	1.4281	0.3765	7.8900e-003	0.3844		1,218.2179	1,218.2179	0.0325	0.0313	1,228.3594
Total	**0.4925**	**2.3225**	**4.9970**	**0.0212**	**1.7398**	**0.0183**	**1.7581**	**0.4687**	**0.0172**	**0.4859**		**2,221.3194**	**2,221.3194**	**0.0659**	**0.1757**	**2,275.3149**

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0516	0.0370	0.4996	1.4100e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		143.8840	143.8840	3.8300e-003	3.7000e-003	145.0818
Total	**0.0516**	**0.0370**	**0.4996**	**1.4100e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**143.8840**	**143.8840**	**3.8300e-003**	**3.7000e-003**	**145.0818**

3.7 Architectural Coating - 2023

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	73.3890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**73.5807**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0860	0.0617	0.8327	2.3400e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		239.8067	239.8067	6.3900e-003	6.1600e-003	241.8030
Total	**0.0860**	**0.0617**	**0.8327**	**2.3400e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**239.8067**	**239.8067**	**6.3900e-003**	**6.1600e-003**	**241.8030**

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	73.3890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**73.5807**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0860	0.0617	0.8327	2.3400e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		239.8067	239.8067	6.3900e-003	6.1600e-003	241.8030
Total	**0.0860**	**0.0617**	**0.8327**	**2.3400e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**239.8067**	**239.8067**	**6.3900e-003**	**6.1600e-003**	**241.8030**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Unmitigated	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
NaturalGas Unmitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	16882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	16.882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Unmitigated	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

7.0 Water Detail

7.1 Mitigation Measures Water

Hotel Rep Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase - increase duration of demolition phase to decrease PM10 to meet LST threshold
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 1113
rule 445

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	3.7431	95.1697	27.8385	0.3108	15.7614	1.3237	17.0850	5.7515	1.2391	6.9906	0.0000	33,781.7440	33,781.7440	2.3310	5.0293	35,338.7494
2023	73.6608	15.8266	19.5601	0.0469	1.7398	0.6318	2.3717	0.4687	0.6051	1.0738	0.0000	4,576.9539	4,576.9539	0.5457	0.1733	4,641.0569
Maximum	**73.6608**	**95.1697**	**27.8385**	**0.3108**	**15.7614**	**1.3237**	**17.0850**	**5.7515**	**1.2391**	**6.9906**	**0.0000**	**33,781.7440**	**33,781.7440**	**2.3310**	**5.0293**	**35,338.7494**

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					
2022	3.7431	95.1697	27.8385	0.3108	11.0378	1.3237	12.3615	3.5555	1.2391	4.7946	0.0000	33,781.7440	33,781.7440	2.3310	5.0293	35,338.7494
2023	73.6608	15.8266	19.5601	0.0469	1.7398	0.6318	2.3717	0.4687	0.6051	1.0738	0.0000	4,576.9539	4,576.9539	0.5457	0.1733	4,641.0569
Maximum	**73.6608**	**95.1697**	**27.8385**	**0.3108**	**11.0378**	**1.3237**	**12.3615**	**3.5555**	**1.2391**	**4.7946**	**0.0000**	**33,781.7440**	**33,781.7440**	**2.3310**	**5.0293**	**35,338.7494**

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	26.99	0.00	24.28	35.30	0.00	27.23	0.00	0.00	0.00	0.00	0.00	0.00

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Total	**7.9051**	**5.3316**	**34.0137**	**0.0777**	**6.5986**	**0.2009**	**6.7995**	**1.7576**	**0.1974**	**1.9550**		**9,166.4180**	**9,166.4180**	**0.5406**	**0.3434**	**9,282.2709**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Total	**7.9051**	**5.3316**	**34.0137**	**0.0777**	**6.5986**	**0.2009**	**6.7995**	**1.7576**	**0.1974**	**1.9550**		**9,166.4180**	**9,166.4180**	**0.5406**	**0.3434**	**9,282.2709**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	
4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					11.0893	0.0000	11.0893	1.6790	0.0000	1.6790			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**11.0893**	**0.8379**	**11.9272**	**1.6790**	**0.7829**	**2.4619**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2387	8.6059	2.0066	0.0318	0.8969	0.0639	0.9609	0.2459	0.0612	0.3071		3,488.3881	3,488.3881	0.1853	0.5535	3,657.9565
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.2837**	**8.6388**	**2.5190**	**0.0332**	**1.0422**	**0.0649**	**1.1071**	**0.2845**	**0.0620**	**0.3465**		**3,623.6046**	**3,623.6046**	**0.1889**	**0.5567**	**3,794.2339**

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					4.1086	0.0000	4.1086	0.6221	0.0000	0.6221			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**4.1086**	**0.8379**	**4.9465**	**0.6221**	**0.7829**	**1.4050**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.2387	8.6059	2.0066	0.0318	0.8969	0.0639	0.9609	0.2459	0.0612	0.3071		3,488.3881	3,488.3881	0.1853	0.5535	3,657.9565
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.2837**	**8.6388**	**2.5190**	**0.0332**	**1.0422**	**0.0649**	**1.1071**	**0.2845**	**0.0620**	**0.3465**		**3,623.6046**	**3,623.6046**	**0.1889**	**0.5567**	**3,794.2339**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.5036	0.0000	7.5036	3.4885	0.0000	3.4885			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**7.5036**	**0.7423**	**8.2459**	**3.4885**	**0.6829**	**4.1714**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1682	78.1608	18.2242	0.2892	8.1459	0.5807	8.7266	2.2334	0.5556	2.7889		31,682.2488	31,682.2488	1.6828	5.0268	33,222.3037
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**2.2028**	**78.1861**	**18.6183**	**0.2902**	**8.2577**	**0.5814**	**8.8391**	**2.2630**	**0.5562**	**2.8192**		**31,786.2616**	**31,786.2616**	**1.6856**	**5.0293**	**33,327.1324**

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					2.7801	0.0000	2.7801	1.2925	0.0000	1.2925			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.7801**	**0.7423**	**3.5224**	**1.2925**	**0.6829**	**1.9754**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	2.1682	78.1608	18.2242	0.2892	8.1459	0.5807	8.7266	2.2334	0.5556	2.7889		31,682.2488	31,682.2488	1.6828	5.0268	33,222.3037
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**2.2028**	**78.1861**	**18.6183**	**0.2902**	**8.2577**	**0.5814**	**8.8391**	**2.2630**	**0.5562**	**2.8192**		**31,786.2616**	**31,786.2616**	**1.6856**	**5.0293**	**33,327.1324**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0984	2.4492	0.8397	9.7900e-003	0.3203	0.0233	0.3436	0.0922	0.0223	0.1145		1,052.3080	1,052.3080	0.0352	0.1516	1,098.3757
Worker	0.4395	0.3209	5.0055	0.0130	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,320.9614	1,320.9614	0.0358	0.0318	1,331.3255
Total	**0.5379**	**2.7701**	**5.8452**	**0.0228**	**1.7398**	**0.0324**	**1.7723**	**0.4687**	**0.0307**	**0.4994**		**2,373.2694**	**2,373.2694**	**0.0709**	**0.1834**	**2,429.7012**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0984	2.4492	0.8397	9.7900e-003	0.3203	0.0233	0.3436	0.0922	0.0223	0.1145		1,052.3080	1,052.3080	0.0352	0.1516	1,098.3757
Worker	0.4395	0.3209	5.0055	0.0130	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,320.9614	1,320.9614	0.0358	0.0318	1,331.3255
Total	**0.5379**	**2.7701**	**5.8452**	**0.0228**	**1.7398**	**0.0324**	**1.7723**	**0.4687**	**0.0307**	**0.4994**		**2,373.2694**	**2,373.2694**	**0.0709**	**0.1834**	**2,429.7012**

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0576	1.9192	0.7435	9.3100e-003	0.3203	9.6500e-003	0.3299	0.0922	9.2300e-003	0.1015		1,001.4124	1,001.4124	0.0336	0.1440	1,045.1555
Worker	0.4067	0.2835	4.6021	0.0126	1.4196	8.5700e-003	1.4281	0.3765	7.8900e-003	0.3844		1,286.0182	1,286.0182	0.0320	0.0293	1,295.5535
Total	**0.4643**	**2.2027**	**5.3456**	**0.0219**	**1.7398**	**0.0182**	**1.7581**	**0.4687**	**0.0171**	**0.4858**		**2,287.4306**	**2,287.4306**	**0.0656**	**0.1733**	**2,340.7090**

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0576	1.9192	0.7435	9.3100e-003	0.3203	9.6500e-003	0.3299	0.0922	9.2300e-003	0.1015		1,001.4124	1,001.4124	0.0336	0.1440	1,045.1555
Worker	0.4067	0.2835	4.6021	0.0126	1.4196	8.5700e-003	1.4281	0.3765	7.8900e-003	0.3844		1,286.0182	1,286.0182	0.0320	0.0293	1,295.5535
Total	**0.4643**	**2.2027**	**5.3456**	**0.0219**	**1.7398**	**0.0182**	**1.7581**	**0.4687**	**0.0171**	**0.4858**		**2,287.4306**	**2,287.4306**	**0.0656**	**0.1733**	**2,340.7090**

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**		**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8802**	**8.6098**	**11.6840**	**0.0179**		**0.4338**	**0.4338**		**0.4003**	**0.4003**	**0.0000**	**1,709.9926**	**1,709.9926**	**0.5420**		**1,723.5414**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0480	0.0335	0.5436	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		151.8919	151.8919	3.7800e-003	3.4600e-003	153.0181
Total	**0.0480**	**0.0335**	**0.5436**	**1.4800e-003**	**0.1677**	**1.0100e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**151.8919**	**151.8919**	**3.7800e-003**	**3.4600e-003**	**153.0181**

3.7 Architectural Coating - 2023

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	73.3890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**73.5807**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0801	0.0558	0.9059	2.4700e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		253.1532	253.1532	6.3000e-003	5.7700e-003	255.0302
Total	**0.0801**	**0.0558**	**0.9059**	**2.4700e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**253.1532**	**253.1532**	**6.3000e-003**	**5.7700e-003**	**255.0302**

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	73.3890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**73.5807**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0801	0.0558	0.9059	2.4700e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		253.1532	253.1532	6.3000e-003	5.7700e-003	255.0302
Total	**0.0801**	**0.0558**	**0.9059**	**2.4700e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**253.1532**	**253.1532**	**6.3000e-003**	**5.7700e-003**	**255.0302**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Unmitigated	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
NaturalGas Unmitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423

Hotel Rep Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	16882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	16.882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Unmitigated	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Hotel Rep Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase - increase duration of demolition phase to decrease PM10 to meet LST threshold
increase duration of grading to decrease daily NOX emissions
increase duration of arch coating to decrease daily VOC emissions

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Hotel Rep Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Mitigation - rule 1113
rule 445

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	12.00
tblConstructionPhase	NumDays	20.00	29.00
tblConstructionPhase	NumDays	6.00	26.00
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3203	3.4592	2.6295	9.6900e-003	0.5536	0.1054	0.6590	0.1495	0.1003	0.2498	0.0000	902.4465	902.4465	0.0858	0.0837	929.5419
2023	0.4662	0.1951	0.2507	5.5000e-004	0.0178	8.3000e-003	0.0261	4.8000e-003	7.8900e-003	0.0127	0.0000	48.2454	48.2454	6.6800e-003	1.4900e-003	48.8557
Maximum	**0.4662**	**3.4592**	**2.6295**	**9.6900e-003**	**0.5536**	**0.1054**	**0.6590**	**0.1495**	**0.1003**	**0.2498**	**0.0000**	**902.4465**	**902.4465**	**0.0858**	**0.0837**	**929.5419**

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					
2022	0.3203	3.4592	2.6295	9.6900e-003	0.3895	0.1054	0.4949	0.1055	0.1003	0.2058	0.0000	902.4462	902.4462	0.0858	0.0837	929.5416
2023	0.4662	0.1951	0.2507	5.5000e-004	0.0178	8.3000e-003	0.0261	4.8000e-003	7.8900e-003	0.0127	0.0000	48.2454	48.2454	6.6800e-003	1.4900e-003	48.8557
Maximum	**0.4662**	**3.4592**	**2.6295**	**9.6900e-003**	**0.3895**	**0.1054**	**0.4949**	**0.1055**	**0.1003**	**0.2058**	**0.0000**	**902.4462**	**902.4462**	**0.0858**	**0.0837**	**929.5416**

Hotel Rep Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.72**	**0.00**	**23.95**	**28.53**	**0.00**	**16.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	1.7977	1.7977
2	**4-3-2022**	**7-2-2022**	0.6424	0.6424
3	**7-3-2022**	**10-2-2022**	0.6496	0.6496
4	**10-3-2022**	**1-2-2023**	0.6536	0.6536
5	**1-3-2023**	**4-2-2023**	0.6258	0.6258
		Highest	1.7977	1.7977

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	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	651.7633	651.7633	7.6200e-003	7.2900e-003	654.1272
Mobile	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Waste						0.0000	0.0000		0.0000	0.0000	14.8183	0.0000	14.8183	0.8757	0.0000	36.7118
Water						0.0000	0.0000		0.0000	0.0000	1.4875	8.4174	9.9048	0.1528	3.6100e-003	14.7992
Total	**1.3765**	**0.9930**	**5.8794**	**0.0132**	**1.1175**	**0.0362**	**1.1537**	**0.2981**	**0.0356**	**0.3337**	**16.3058**	**1,686.0169**	**1,702.3226**	**1.1162**	**0.0601**	**1,748.1474**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	651.7633	651.7633	7.6200e-003	7.2900e-003	654.1272
Mobile	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Waste						0.0000	0.0000		0.0000	0.0000	7.4092	0.0000	7.4092	0.4379	0.0000	18.3559
Water						0.0000	0.0000		0.0000	0.0000	1.4875	8.4174	9.9048	0.1528	3.6100e-003	14.7992
Total	**1.3765**	**0.9930**	**5.8794**	**0.0132**	**1.1175**	**0.0362**	**1.1537**	**0.2981**	**0.0356**	**0.3337**	**8.8966**	**1,686.0169**	**1,694.9135**	**0.6783**	**0.0601**	**1,729.7915**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**45.44**	**0.00**	**0.44**	**39.23**	**0.00**	**1.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	2/10/2022	5	29	
2	Site Preparation	Site Preparation	2/11/2022	2/15/2022	5	3	
3	Grading	Grading	2/16/2022	3/23/2022	5	26	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	3/24/2022	1/25/2023	5	220	
5	Paving	Paving	1/26/2023	2/8/2023	5	10	
6	Architectural Coating	Architectural Coating	2/9/2023	2/24/2023	5	12	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 26

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.1608	0.0000	0.1608	0.0244	0.0000	0.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2410	0.2024	3.5000e-004		0.0122	0.0122		0.0114	0.0114	0.0000	30.5626	30.5626	7.7900e-003	0.0000	30.7574
Total	**0.0245**	**0.2410**	**0.2024**	**3.5000e-004**	**0.1608**	**0.0122**	**0.1729**	**0.0244**	**0.0114**	**0.0357**	**0.0000**	**30.5626**	**30.5626**	**7.7900e-003**	**0.0000**	**30.7574**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	7.0000e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7098	1.7098	5.0000e-005	5.0000e-005	1.7249
Total	**4.0800e-003**	**0.1320**	**0.0363**	**4.8000e-004**	**0.0149**	**9.4000e-004**	**0.0158**	**4.0600e-003**	**9.0000e-004**	**4.9600e-003**	**0.0000**	**47.6023**	**47.6023**	**2.4900e-003**	**7.3300e-003**	**49.8483**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.0596	0.0000	0.0596	9.0200e-003	0.0000	9.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0245	0.2410	0.2024	3.5000e-004		0.0122	0.0122		0.0114	0.0114	0.0000	30.5626	30.5626	7.7900e-003	0.0000	30.7573
Total	**0.0245**	**0.2410**	**0.2024**	**3.5000e-004**	**0.0596**	**0.0122**	**0.0717**	**9.0200e-003**	**0.0114**	**0.0204**	**0.0000**	**30.5626**	**30.5626**	**7.7900e-003**	**0.0000**	**30.7573**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.4000e-004	7.0000e-003	2.0000e-005	2.0700e-003	1.0000e-005	2.0800e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7098	1.7098	5.0000e-005	5.0000e-005	1.7249
Total	**4.0800e-003**	**0.1320**	**0.0363**	**4.8000e-004**	**0.0149**	**9.4000e-004**	**0.0158**	**4.0600e-003**	**9.0000e-004**	**4.9600e-003**	**0.0000**	**47.6023**	**47.6023**	**2.4900e-003**	**7.3300e-003**	**49.8483**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					8.8000e-004	0.0000	8.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**8.8000e-004**	**8.9000e-004**	**1.7700e-003**	**1.0000e-004**	**8.2000e-004**	**9.2000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0976	0.0000	0.0976	0.0454	0.0000	0.0454	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2208	0.1199	2.7000e-004		9.6500e-003	9.6500e-003		8.8800e-003	8.8800e-003	0.0000	23.5335	23.5335	7.6100e-003	0.0000	23.7238
Total	**0.0200**	**0.2208**	**0.1199**	**2.7000e-004**	**0.0976**	**9.6500e-003**	**0.1072**	**0.0454**	**8.8800e-003**	**0.0542**	**0.0000**	**23.5335**	**23.5335**	**7.6100e-003**	**0.0000**	**23.7238**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**0.0284**	**1.0706**	**0.2434**	**3.7700e-003**	**0.1055**	**7.5700e-003**	**0.1131**	**0.0290**	**7.2400e-003**	**0.0362**	**0.0000**	**374.8666**	**374.8666**	**0.0199**	**0.0593**	**393.0420**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0361	0.0000	0.0361	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2208	0.1199	2.7000e-004		9.6500e-003	9.6500e-003		8.8800e-003	8.8800e-003	0.0000	23.5335	23.5335	7.6100e-003	0.0000	23.7238
Total	**0.0200**	**0.2208**	**0.1199**	**2.7000e-004**	**0.0361**	**9.6500e-003**	**0.0458**	**0.0168**	**8.8800e-003**	**0.0257**	**0.0000**	**23.5335**	**23.5335**	**7.6100e-003**	**0.0000**	**23.7238**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**0.0284**	**1.0706**	**0.2434**	**3.7700e-003**	**0.1055**	**7.5700e-003**	**0.1131**	**0.0290**	**7.2400e-003**	**0.0362**	**0.0000**	**374.8666**	**374.8666**	**0.0199**	**0.0593**	**393.0420**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.1874	1.4750	1.4497	2.5300e-003		0.0709	0.0709		0.0680	0.0680	0.0000	209.7569	209.7569	0.0405	0.0000	210.7686
Total	**0.1874**	**1.4750**	**1.4497**	**2.5300e-003**		**0.0709**	**0.0709**		**0.0680**	**0.0680**	**0.0000**	**209.7569**	**209.7569**	**0.0405**	**0.0000**	**210.7686**

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	9.8600e-003	0.2597	0.0861	9.9000e-004	0.0318	2.3600e-003	0.0342	9.1900e-003	2.2600e-003	0.0114	0.0000	96.4338	96.4338	3.2200e-003	0.0139	100.6595
Worker	0.0440	0.0366	0.4762	1.2600e-003	0.1406	9.2000e-004	0.1415	0.0373	8.5000e-004	0.0382	0.0000	116.3499	116.3499	3.3200e-003	3.1600e-003	117.3743
Total	**0.0538**	**0.2963**	**0.5623**	**2.2500e-003**	**0.1724**	**3.2800e-003**	**0.1757**	**0.0465**	**3.1100e-003**	**0.0496**	**0.0000**	**212.7836**	**212.7836**	**6.5400e-003**	**0.0171**	**218.0338**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.1874	1.4750	1.4497	2.5300e-003		0.0709	0.0709		0.0680	0.0680	0.0000	209.7567	209.7567	0.0405	0.0000	210.7684
Total	**0.1874**	**1.4750**	**1.4497**	**2.5300e-003**		**0.0709**	**0.0709**		**0.0680**	**0.0680**	**0.0000**	**209.7567**	**209.7567**	**0.0405**	**0.0000**	**210.7684**

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	9.8600e-003	0.2597	0.0861	9.9000e-004	0.0318	2.3600e-003	0.0342	9.1900e-003	2.2600e-003	0.0114	0.0000	96.4338	96.4338	3.2200e-003	0.0139	100.6595
Worker	0.0440	0.0366	0.4762	1.2600e-003	0.1406	9.2000e-004	0.1415	0.0373	8.5000e-004	0.0382	0.0000	116.3499	116.3499	3.3200e-003	3.1600e-003	117.3743
Total	**0.0538**	**0.2963**	**0.5623**	**2.2500e-003**	**0.1724**	**3.2800e-003**	**0.1757**	**0.0465**	**3.1100e-003**	**0.0496**	**0.0000**	**212.7836**	**212.7836**	**6.5400e-003**	**0.0171**	**218.0338**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0154	0.1226	0.1279	2.3000e-004		5.5200e-003	5.5200e-003		5.2900e-003	5.2900e-003	0.0000	18.6932	18.6932	3.5400e-003	0.0000	18.7816
Total	**0.0154**	**0.1226**	**0.1279**	**2.3000e-004**		**5.5200e-003**	**5.5200e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**18.6932**	**18.6932**	**3.5400e-003**	**0.0000**	**18.7816**

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	5.1000e-004	0.0181	6.7900e-003	8.0000e-005	2.8400e-003	9.0000e-005	2.9200e-003	8.2000e-004	8.0000e-005	9.0000e-004	0.0000	8.1820	8.1820	2.7000e-004	1.1800e-003	8.5397
Worker	3.6300e-003	2.8800e-003	0.0391	1.1000e-004	0.0125	8.0000e-005	0.0126	3.3300e-003	7.0000e-005	3.4000e-003	0.0000	10.0947	10.0947	2.7000e-004	2.6000e-004	10.1787
Total	**4.1400e-003**	**0.0210**	**0.0458**	**1.9000e-004**	**0.0154**	**1.7000e-004**	**0.0155**	**4.1500e-003**	**1.5000e-004**	**4.3000e-003**	**0.0000**	**18.2767**	**18.2767**	**5.4000e-004**	**1.4400e-003**	**18.7184**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.0154	0.1226	0.1279	2.3000e-004		5.5200e-003	5.5200e-003		5.2900e-003	5.2900e-003	0.0000	18.6932	18.6932	3.5400e-003	0.0000	18.7815
Total	**0.0154**	**0.1226**	**0.1279**	**2.3000e-004**		**5.5200e-003**	**5.5200e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**18.6932**	**18.6932**	**3.5400e-003**	**0.0000**	**18.7815**

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	5.1000e-004	0.0181	6.7900e-003	8.0000e-005	2.8400e-003	9.0000e-005	2.9200e-003	8.2000e-004	8.0000e-005	9.0000e-004	0.0000	8.1820	8.1820	2.7000e-004	1.1800e-003	8.5397
Worker	3.6300e-003	2.8800e-003	0.0391	1.1000e-004	0.0125	8.0000e-005	0.0126	3.3300e-003	7.0000e-005	3.4000e-003	0.0000	10.0947	10.0947	2.7000e-004	2.6000e-004	10.1787
Total	**4.1400e-003**	**0.0210**	**0.0458**	**1.9000e-004**	**0.0154**	**1.7000e-004**	**0.0155**	**4.1500e-003**	**1.5000e-004**	**4.3000e-003**	**0.0000**	**18.2767**	**18.2767**	**5.4000e-004**	**1.4400e-003**	**18.7184**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8179**

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	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**2.4000e-004**	**1.9000e-004**	**2.5600e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6624**	**0.6624**	**2.0000e-005**	**2.0000e-005**	**0.6679**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.4000e-003**	**0.0431**	**0.0584**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.0000e-003**	**2.0000e-003**	**0.0000**	**7.7564**	**7.7564**	**2.4600e-003**	**0.0000**	**7.8178**

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	2.4000e-004	1.9000e-004	2.5600e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6624	0.6624	2.0000e-005	2.0000e-005	0.6679
Total	**2.4000e-004**	**1.9000e-004**	**2.5600e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6624**	**0.6624**	**2.0000e-005**	**2.0000e-005**	**0.6679**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.4403					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1500e-003	7.8200e-003	0.0109	2.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.5320	1.5320	9.0000e-005	0.0000	1.5342
Total	**0.4415**	**7.8200e-003**	**0.0109**	**2.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.5320**	**1.5320**	**9.0000e-005**	**0.0000**	**1.5342**

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	4.8000e-004	3.8000e-004	5.1200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3248	1.3248	3.0000e-005	3.0000e-005	1.3358
Total	**4.8000e-004**	**3.8000e-004**	**5.1200e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3248**	**1.3248**	**3.0000e-005**	**3.0000e-005**	**1.3358**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.4403					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1500e-003	7.8200e-003	0.0109	2.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	1.5320	1.5320	9.0000e-005	0.0000	1.5342
Total	**0.4415**	**7.8200e-003**	**0.0109**	**2.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**	**0.0000**	**1.5320**	**1.5320**	**9.0000e-005**	**0.0000**	**1.5342**

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	4.8000e-004	3.8000e-004	5.1200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3248	1.3248	3.0000e-005	3.0000e-005	1.3358
Total	**4.8000e-004**	**3.8000e-004**	**5.1200e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3248**	**1.3248**	**3.0000e-005**	**3.0000e-005**	**1.3358**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Unmitigated	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	253.9588	253.9588	0.0000	0.0000	253.9588
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	253.9588	253.9588	0.0000	0.0000	253.9588
NaturalGas Mitigated	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	397.8045	397.8045	7.6200e-003	7.2900e-003	400.1685
NaturalGas Unmitigated	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	397.8045	397.8045	7.6200e-003	7.2900e-003	400.1685

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	6.16193e+006	0.0332	0.3021	0.2537	1.8100e-003		0.0230	0.0230		0.0230	0.0230	0.0000	328.8238	328.8238	6.3000e-003	6.0300e-003	330.7778
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0402**	**0.3654**	**0.3070**	**2.1900e-003**		**0.0278**	**0.0278**		**0.0278**	**0.0278**	**0.0000**	**397.8045**	**397.8045**	**7.6200e-003**	**7.2900e-003**	**400.1685**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	6.16193e+006	0.0332	0.3021	0.2537	1.8100e-003		0.0230	0.0230		0.0230	0.0230	0.0000	328.8238	328.8238	6.3000e-003	6.0300e-003	330.7778
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0402**	**0.3654**	**0.3070**	**2.1900e-003**		**0.0278**	**0.0278**		**0.0278**	**0.0278**	**0.0000**	**397.8045**	**397.8045**	**7.6200e-003**	**7.2900e-003**	**400.1685**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.58813e+006	202.4216	0.0000	0.0000	202.4216
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	226592	28.8813	0.0000	0.0000	28.8813
Total		**253.9588**	**0.0000**	**0.0000**	**253.9588**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.58813e+006	202.4216	0.0000	0.0000	202.4216
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	226592	28.8813	0.0000	0.0000	28.8813
Total		**253.9588**	**0.0000**	**0.0000**	**253.9588**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Unmitigated	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.7260**	**5.0000e-005**	**5.3800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.7260**	**5.0000e-005**	**5.3800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.9048	0.1528	3.6100e-003	14.7992
Unmitigated	9.9048	0.1528	3.6100e-003	14.7992

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.17085 / 0.352316	6.7674	0.1033	2.4400e-003	10.0774
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9048**	**0.1528**	**3.6100e-003**	**14.7992**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.17085 / 0.352316	6.7674	0.1033	2.4400e-003	10.0774
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9048**	**0.1528**	**3.6100e-003**	**14.7992**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4092	0.4379	0.0000	18.3559
Unmitigated	14.8183	0.8757	0.0000	36.7118

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	68.44	13.8927	0.8210	0.0000	34.4186
Quality Restaurant	4.56	0.9256	0.0547	0.0000	2.2932
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**14.8183**	**0.8757**	**0.0000**	**36.7118**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	34.22	6.9464	0.4105	0.0000	17.2093
Quality Restaurant	2.28	0.4628	0.0274	0.0000	1.1466
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4092**	**0.4379**	**0.0000**	**18.3559**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project Defaults

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase -

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - rule 1113
rule 445

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	88.3640	369.4530	89.9435	1.2752	44.3180	3.2645	47.5825	13.4086	3.0960	16.5046	0.0000	139,423.9873	139,423.9873	7.9280	21.7926	146,116.3753
2023	88.3445	1.3646	2.6438	5.3100e-003	0.2794	0.0725	0.3520	0.0741	0.0724	0.1465	0.0000	521.2547	521.2547	0.0232	6.1600e-003	523.6720
Maximum	**88.3640**	**369.4530**	**89.9435**	**1.2752**	**44.3180**	**3.2645**	**47.5825**	**13.4086**	**3.0960**	**16.5046**	**0.0000**	**139,423.9873**	**139,423.9873**	**7.9280**	**21.7926**	**146,116.3753**

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					
2022	88.3640	369.4530	89.9435	1.2752	38.7110	3.2645	41.9755	11.0788	3.0960	14.1748	0.0000	139,423.9873	139,423.9873	7.9280	21.7926	146,116.3753
2023	88.3445	1.3646	2.6438	5.3100e-003	0.2794	0.0725	0.3520	0.0741	0.0724	0.1465	0.0000	521.2547	521.2547	0.0232	6.1600e-003	523.6720
Maximum	**88.3640**	**369.4530**	**89.9435**	**1.2752**	**38.7110**	**3.2645**	**41.9755**	**11.0788**	**3.0960**	**14.1748**	**0.0000**	**139,423.9873**	**139,423.9873**	**7.9280**	**21.7926**	**146,116.3753**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	12.57	0.00	11.70	17.28	0.00	13.99	0.00	0.00	0.00	0.00	0.00	0.00

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Total	**7.8169**	**5.6009**	**33.8012**	**0.0749**	**6.5986**	**0.2010**	**6.7995**	**1.7576**	**0.1975**	**1.9550**		**8,882.1765**	**8,882.1765**	**0.5615**	**0.3575**	**9,002.7384**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Total	**7.8169**	**5.6009**	**33.8012**	**0.0749**	**6.5986**	**0.2010**	**6.7995**	**1.7576**	**0.1975**	**1.9550**		**8,882.1765**	**8,882.1765**	**0.5615**	**0.3575**	**9,002.7384**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					16.0794	0.0000	16.0794	2.4346	0.0000	2.4346			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**16.0794**	**0.8379**	**16.9173**	**2.4346**	**0.7829**	**3.2175**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3378	12.9850	2.9608	0.0462	1.3005	0.0929	1.3934	0.3566	0.0889	0.4454		5,059.6455	5,059.6455	0.2682	0.8028	5,305.5865
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.3860**	**13.0213**	**3.4312**	**0.0475**	**1.4458**	**0.0938**	**1.5397**	**0.3951**	**0.0897**	**0.4848**		**5,187.7128**	**5,187.7128**	**0.2719**	**0.8063**	**5,434.7823**

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					5.9574	0.0000	5.9574	0.9020	0.0000	0.9020			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**5.9574**	**0.8379**	**6.7953**	**0.9020**	**0.7829**	**1.6849**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3378	12.9850	2.9608	0.0462	1.3005	0.0929	1.3934	0.3566	0.0889	0.4454		5,059.6455	5,059.6455	0.2682	0.8028	5,305.5865
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
Worker	0.0482	0.0363	0.4704	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		128.0673	128.0673	3.7000e-003	3.4800e-003	129.1958
Total	**0.3860**	**13.0213**	**3.4312**	**0.0475**	**1.4458**	**0.0938**	**1.5397**	**0.3951**	**0.0897**	**0.4848**		**5,187.7128**	**5,187.7128**	**0.2719**	**0.8063**	**5,434.7823**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0296**	**0.0223**	**0.2895**	**7.7000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**78.8107**	**78.8107**	**2.2800e-003**	**2.1400e-003**	**79.5051**

3.4 Grading - 2022

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					8.9071	0.0000	8.9071	3.7010	0.0000	3.7010			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**8.9071**	**0.7423**	**9.6494**	**3.7010**	**0.6829**	**4.3839**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.1698	352.4415	80.3615	1.2536	35.2991	2.5215	37.8206	9.6779	2.4125	12.0904		137,329.9915	137,329.9915	7.2798	21.7899	144,005.3770
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**9.2069**	**352.4694**	**80.7234**	**1.2546**	**35.4109**	**2.5223**	**37.9331**	**9.7075**	**2.4131**	**12.1207**		**137,428.5049**	**137,428.5049**	**7.2826**	**21.7926**	**144,104.7584**

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					3.3001	0.0000	3.3001	1.3712	0.0000	1.3712			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.3001**	**0.7423**	**4.0424**	**1.3712**	**0.6829**	**2.0541**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.1698	352.4415	80.3615	1.2536	35.2991	2.5215	37.8206	9.6779	2.4125	12.0904		137,329.9915	137,329.9915	7.2798	21.7899	144,005.3770
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
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**9.2069**	**352.4694**	**80.7234**	**1.2546**	**35.4109**	**2.5223**	**37.9331**	**9.7075**	**2.4131**	**12.1207**		**137,428.5049**	**137,428.5049**	**7.2826**	**21.7926**	**144,104.7584**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0972	2.5502	0.8688	9.8000e-003	0.3203	0.0234	0.3437	0.0922	0.0224	0.1146		1,052.7033	1,052.7033	0.0351	0.1518	1,098.8265
Worker	0.4706	0.3546	4.5958	0.0123	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,251.1191	1,251.1191	0.0362	0.0340	1,262.1431
Total	**0.5678**	**2.9048**	**5.4646**	**0.0221**	**1.7398**	**0.0325**	**1.7723**	**0.4687**	**0.0308**	**0.4995**		**2,303.8225**	**2,303.8225**	**0.0713**	**0.1858**	**2,360.9695**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0972	2.5502	0.8688	9.8000e-003	0.3203	0.0234	0.3437	0.0922	0.0224	0.1146		1,052.7033	1,052.7033	0.0351	0.1518	1,098.8265
Worker	0.4706	0.3546	4.5958	0.0123	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,251.1191	1,251.1191	0.0362	0.0340	1,262.1431
Total	**0.5678**	**2.9048**	**5.4646**	**0.0221**	**1.7398**	**0.0325**	**1.7723**	**0.4687**	**0.0308**	**0.4995**		**2,303.8225**	**2,303.8225**	**0.0713**	**0.1858**	**2,360.9695**

3.6 Paving - 2022

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0556	0.0419	0.5428	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.7700	147.7700	4.2700e-003	4.0100e-003	149.0720
Total	**0.0556**	**0.0419**	**0.5428**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.7700**	**147.7700**	**4.2700e-003**	**4.0100e-003**	**149.0720**

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0556	0.0419	0.5428	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.7700	147.7700	4.2700e-003	4.0100e-003	149.0720
Total	**0.0556**	**0.0419**	**0.5428**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.7700**	**147.7700**	**4.2700e-003**	**4.0100e-003**	**149.0720**

3.7 Architectural Coating - 2022

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**88.2714**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0926	0.0698	0.9047	2.4200e-003	0.2794	1.7900e-003	0.2812	0.0741	1.6500e-003	0.0758		246.2833	246.2833	7.1200e-003	6.6800e-003	248.4534
Total	**0.0926**	**0.0698**	**0.9047**	**2.4200e-003**	**0.2794**	**1.7900e-003**	**0.2812**	**0.0741**	**1.6500e-003**	**0.0758**		**246.2833**	**246.2833**	**7.1200e-003**	**6.6800e-003**	**248.4534**

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**88.2714**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0926	0.0698	0.9047	2.4200e-003	0.2794	1.7900e-003	0.2812	0.0741	1.6500e-003	0.0758		246.2833	246.2833	7.1200e-003	6.6800e-003	248.4534
Total	**0.0926**	**0.0698**	**0.9047**	**2.4200e-003**	**0.2794**	**1.7900e-003**	**0.2812**	**0.0741**	**1.6500e-003**	**0.0758**		**246.2833**	**246.2833**	**7.1200e-003**	**6.6800e-003**	**248.4534**

3.7 Architectural Coating - 2023

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**88.2585**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0860	0.0617	0.8327	2.3400e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		239.8067	239.8067	6.3900e-003	6.1600e-003	241.8030
Total	**0.0860**	**0.0617**	**0.8327**	**2.3400e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**239.8067**	**239.8067**	**6.3900e-003**	**6.1600e-003**	**241.8030**

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**88.2585**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0860	0.0617	0.8327	2.3400e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		239.8067	239.8067	6.3900e-003	6.1600e-003	241.8030
Total	**0.0860**	**0.0617**	**0.8327**	**2.3400e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**239.8067**	**239.8067**	**6.3900e-003**	**6.1600e-003**	**241.8030**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976
Unmitigated	3.6173	3.5982	32.0762	0.0629	6.5986	0.0487	6.6472	1.7576	0.0452	1.8027		6,479.3203	6,479.3203	0.5152	0.3134	6,585.5976

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
NaturalGas Unmitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	16882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	16.882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Unmitigated	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

7.0 Water Detail

7.1 Mitigation Measures Water

Hotel Rep Project Defaults - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project Defaults

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase -

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - rule 1113
rule 445

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	88.3579	355.7057	88.5858	1.2749	44.3180	3.2593	47.5773	13.4086	3.0910	16.4996	0.0000	139,389.2401	139,389.2401	7.9402	21.7853	146,079.7616
2023	88.3386	1.3588	2.7171	5.4400e-003	0.2794	0.0725	0.3520	0.0741	0.0724	0.1465	0.0000	534.6012	534.6012	0.0231	5.7700e-003	536.8992
Maximum	**88.3579**	**355.7057**	**88.5858**	**1.2749**	**44.3180**	**3.2593**	**47.5773**	**13.4086**	**3.0910**	**16.4996**	**0.0000**	**139,389.2401**	**139,389.2401**	**7.9402**	**21.7853**	**146,079.7616**

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					
2022	88.3579	355.7057	88.5858	1.2749	38.7110	3.2593	41.9703	11.0788	3.0910	14.1698	0.0000	139,389.2401	139,389.2401	7.9402	21.7853	146,079.7616
2023	88.3386	1.3588	2.7171	5.4400e-003	0.2794	0.0725	0.3520	0.0741	0.0724	0.1465	0.0000	534.6012	534.6012	0.0231	5.7700e-003	536.8992
Maximum	**88.3579**	**355.7057**	**88.5858**	**1.2749**	**38.7110**	**3.2593**	**41.9703**	**11.0788**	**3.0910**	**14.1698**	**0.0000**	**139,389.2401**	**139,389.2401**	**7.9402**	**21.7853**	**146,079.7616**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	12.57	0.00	11.70	17.28	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Total	**7.9051**	**5.3316**	**34.0137**	**0.0777**	**6.5986**	**0.2009**	**6.7995**	**1.7576**	**0.1974**	**1.9550**		**9,166.4180**	**9,166.4180**	**0.5406**	**0.3434**	**9,282.2709**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Energy	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
Mobile	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Total	**7.9051**	**5.3316**	**34.0137**	**0.0777**	**6.5986**	**0.2009**	**6.7995**	**1.7576**	**0.1974**	**1.9550**		**9,166.4180**	**9,166.4180**	**0.5406**	**0.3434**	**9,282.2709**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	
4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

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					16.0794	0.0000	16.0794	2.4346	0.0000	2.4346			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**16.0794**	**0.8379**	**16.9173**	**2.4346**	**0.7829**	**3.2175**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3462	12.4786	2.9095	0.0462	1.3005	0.0927	1.3932	0.3566	0.0887	0.4453		5,058.1627	5,058.1627	0.2687	0.8025	5,304.0369
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.3912**	**12.5115**	**3.4219**	**0.0475**	**1.4458**	**0.0936**	**1.5395**	**0.3951**	**0.0896**	**0.4847**		**5,193.3792**	**5,193.3792**	**0.2723**	**0.8058**	**5,440.3143**

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					5.9574	0.0000	5.9574	0.9020	0.0000	0.9020			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**	**5.9574**	**0.8379**	**6.7953**	**0.9020**	**0.7829**	**1.6849**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	0.3462	12.4786	2.9095	0.0462	1.3005	0.0927	1.3932	0.3566	0.0887	0.4453		5,058.1627	5,058.1627	0.2687	0.8025	5,304.0369
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
Worker	0.0450	0.0329	0.5124	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		135.2165	135.2165	3.6600e-003	3.2500e-003	136.2774
Total	**0.3912**	**12.5115**	**3.4219**	**0.0475**	**1.4458**	**0.0936**	**1.5395**	**0.3951**	**0.0896**	**0.4847**		**5,193.3792**	**5,193.3792**	**0.2723**	**0.8058**	**5,440.3143**

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**1.5908**	**0.5952**	**2.1859**	**0.1718**	**0.5476**	**0.7193**		**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

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					0.5894	0.0000	0.5894	0.0636	0.0000	0.0636			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	**1.3784**	**15.6673**	**10.0558**	**0.0245**	**0.5894**	**0.5952**	**1.1846**	**0.0636**	**0.5476**	**0.6112**	**0.0000**	**2,375.1569**	**2,375.1569**	**0.7682**		**2,394.3613**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0277**	**0.0202**	**0.3153**	**8.2000e-004**	**0.0894**	**5.7000e-004**	**0.0900**	**0.0237**	**5.3000e-004**	**0.0242**		**83.2102**	**83.2102**	**2.2500e-003**	**2.0000e-003**	**83.8630**

3.4 Grading - 2022

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					8.9071	0.0000	8.9071	3.7010	0.0000	3.7010			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**8.9071**	**0.7423**	**9.6494**	**3.7010**	**0.6829**	**4.3839**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.3955	338.6968	78.9715	1.2533	35.2991	2.5163	37.8154	9.6779	2.4075	12.0854		137,289.7450	137,289.7450	7.2920	21.7828	143,963.3159
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**9.4301**	**338.7221**	**79.3656**	**1.2543**	**35.4109**	**2.5171**	**37.9279**	**9.7075**	**2.4081**	**12.1157**		**137,393.7577**	**137,393.7577**	**7.2949**	**21.7853**	**144,068.1446**

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					3.3001	0.0000	3.3001	1.3712	0.0000	1.3712			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**3.3001**	**0.7423**	**4.0424**	**1.3712**	**0.6829**	**2.0541**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.3955	338.6968	78.9715	1.2533	35.2991	2.5163	37.8154	9.6779	2.4075	12.0854		137,289.7450	137,289.7450	7.2920	21.7828	143,963.3159
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
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**9.4301**	**338.7221**	**79.3656**	**1.2543**	**35.4109**	**2.5171**	**37.9279**	**9.7075**	**2.4081**	**12.1157**		**137,393.7577**	**137,393.7577**	**7.2949**	**21.7853**	**144,068.1446**

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**		**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0984	2.4492	0.8397	9.7900e-003	0.3203	0.0233	0.3436	0.0922	0.0223	0.1145		1,052.3080	1,052.3080	0.0352	0.1516	1,098.3757
Worker	0.4395	0.3209	5.0055	0.0130	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,320.9614	1,320.9614	0.0358	0.0318	1,331.3255
Total	**0.5379**	**2.7701**	**5.8452**	**0.0228**	**1.7398**	**0.0324**	**1.7723**	**0.4687**	**0.0307**	**0.4994**		**2,373.2694**	**2,373.2694**	**0.0709**	**0.1834**	**2,429.7012**

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.8555**	**14.6040**	**14.3533**	**0.0250**		**0.7022**	**0.7022**		**0.6731**	**0.6731**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0984	2.4492	0.8397	9.7900e-003	0.3203	0.0233	0.3436	0.0922	0.0223	0.1145		1,052.3080	1,052.3080	0.0352	0.1516	1,098.3757
Worker	0.4395	0.3209	5.0055	0.0130	1.4196	9.1000e-003	1.4287	0.3765	8.3800e-003	0.3849		1,320.9614	1,320.9614	0.0358	0.0318	1,331.3255
Total	**0.5379**	**2.7701**	**5.8452**	**0.0228**	**1.7398**	**0.0324**	**1.7723**	**0.4687**	**0.0307**	**0.4994**		**2,373.2694**	**2,373.2694**	**0.0709**	**0.1834**	**2,429.7012**

3.6 Paving - 2022

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500		1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**		**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0519	0.0379	0.5912	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		156.0191	156.0191	4.2200e-003	3.7500e-003	157.2432
Total	**0.0519**	**0.0379**	**0.5912**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**156.0191**	**156.0191**	**4.2200e-003**	**3.7500e-003**	**157.2432**

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	0.9412	9.3322	11.6970	0.0179		0.4879	0.4879		0.4500	0.4500	0.0000	1,709.6892	1,709.6892	0.5419		1,723.2356
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**9.3322**	**11.6970**	**0.0179**		**0.4879**	**0.4879**		**0.4500**	**0.4500**	**0.0000**	**1,709.6892**	**1,709.6892**	**0.5419**		**1,723.2356**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0519	0.0379	0.5912	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		156.0191	156.0191	4.2200e-003	3.7500e-003	157.2432
Total	**0.0519**	**0.0379**	**0.5912**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**156.0191**	**156.0191**	**4.2200e-003**	**3.7500e-003**	**157.2432**

3.7 Architectural Coating - 2022

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**88.2714**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0865	0.0632	0.9853	2.5600e-003	0.2794	1.7900e-003	0.2812	0.0741	1.6500e-003	0.0758		260.0318	260.0318	7.0400e-003	6.2600e-003	262.0720
Total	**0.0865**	**0.0632**	**0.9853**	**2.5600e-003**	**0.2794**	**1.7900e-003**	**0.2812**	**0.0741**	**1.6500e-003**	**0.0758**		**260.0318**	**260.0318**	**7.0400e-003**	**6.2600e-003**	**262.0720**

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**88.2714**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0865	0.0632	0.9853	2.5600e-003	0.2794	1.7900e-003	0.2812	0.0741	1.6500e-003	0.0758		260.0318	260.0318	7.0400e-003	6.2600e-003	262.0720
Total	**0.0865**	**0.0632**	**0.9853**	**2.5600e-003**	**0.2794**	**1.7900e-003**	**0.2812**	**0.0741**	**1.6500e-003**	**0.0758**		**260.0318**	**260.0318**	**7.0400e-003**	**6.2600e-003**	**262.0720**

3.7 Architectural Coating - 2023

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**88.2585**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0801	0.0558	0.9059	2.4700e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		253.1532	253.1532	6.3000e-003	5.7700e-003	255.0302
Total	**0.0801**	**0.0558**	**0.9059**	**2.4700e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**253.1532**	**253.1532**	**6.3000e-003**	**5.7700e-003**	**255.0302**

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	88.0669					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**88.2585**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Worker	0.0801	0.0558	0.9059	2.4700e-003	0.2794	1.6900e-003	0.2811	0.0741	1.5500e-003	0.0757		253.1532	253.1532	6.3000e-003	5.7700e-003	255.0302
Total	**0.0801**	**0.0558**	**0.9059**	**2.4700e-003**	**0.2794**	**1.6900e-003**	**0.2811**	**0.0741**	**1.5500e-003**	**0.0757**		**253.1532**	**253.1532**	**6.3000e-003**	**5.7700e-003**	**255.0302**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302
Unmitigated	3.7055	3.3289	32.2887	0.0657	6.5986	0.0486	6.6472	1.7576	0.0451	1.8027		6,763.5617	6,763.5617	0.4943	0.2994	6,865.1302

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423
NaturalGas Unmitigated	0.2203	2.0023	1.6819	0.0120		0.1522	0.1522		0.1522	0.1522		2,402.7639	2,402.7639	0.0461	0.0441	2,417.0423

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	16882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3541.51	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hotel	16.882	0.1821	1.6551	1.3903	9.9300e-003		0.1258	0.1258		0.1258	0.1258		1,986.1160	1,986.1160	0.0381	0.0364	1,997.9185
Quality Restaurant	3.54151	0.0382	0.3472	0.2917	2.0800e-003		0.0264	0.0264		0.0264	0.0264		416.6479	416.6479	7.9900e-003	7.6400e-003	419.1238
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.2203**	**2.0023**	**1.6819**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**		**2,402.7639**	**2,402.7639**	**0.0461**	**0.0441**	**2,417.0423**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Unmitigated	3.9793	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2413					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7341					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.9900e-003	3.9000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0924	0.0924	2.4000e-004		0.0984
Total	**3.9793**	**3.9000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0924**	**0.0924**	**2.4000e-004**		**0.0984**

7.0 Water Detail

7.1 Mitigation Measures Water

Hotel Rep Project Defaults - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hotel Rep Project Defaults

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unenclosed Parking with Elevator	292.00	Space	0.00	116,800.00	0
Hotel	125.00	Room	2.89	181,500.00	0
Quality Restaurant	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	281	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - per RHE Sustainability Element Page 2-47

Land Use - lot size 3 acre with 2-level subterrane parking

Construction Phase -

Demolition -

Grading -

Architectural Coating - rule 1113

Area Coating - rule 1113

Construction Off-road Equipment Mitigation - rule 403

Area Mitigation - rule 1113
rule 445

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste Mitigation - AB 341

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	96,799.90
tblLandUse	LotAcreage	2.63	0.00
tblLandUse	LotAcreage	4.17	2.89
tblProjectCharacteristics	CH4IntensityFactor	0.033	0
tblProjectCharacteristics	CO2IntensityFactor	390.98	281
tblProjectCharacteristics	N2OIntensityFactor	0.004	0

2.0 Emissions Summary

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.3674	3.4195	2.7106	9.8800e-003	0.4974	0.1033	0.6007	0.1192	0.0985	0.2178	0.0000	919.7496	919.7496	0.0842	0.0852	947.2522
2023	0.3975	6.1500e-003	0.0120	2.0000e-005	1.2300e-003	3.3000e-004	1.5600e-003	3.3000e-004	3.3000e-004	6.5000e-004	0.0000	2.1425	2.1425	9.0000e-005	3.0000e-005	2.1525
Maximum	**0.3975**	**3.4195**	**2.7106**	**9.8800e-003**	**0.4974**	**0.1033**	**0.6007**	**0.1192**	**0.0985**	**0.2178**	**0.0000**	**919.7496**	**919.7496**	**0.0842**	**0.0852**	**947.2522**

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					
2022	0.3674	3.4195	2.7106	9.8800e-003	0.3778	0.1033	0.4811	0.0968	0.0985	0.1953	0.0000	919.7493	919.7493	0.0842	0.0852	947.2519
2023	0.3975	6.1500e-003	0.0120	2.0000e-005	1.2300e-003	3.3000e-004	1.5600e-003	3.3000e-004	3.3000e-004	6.5000e-004	0.0000	2.1425	2.1425	9.0000e-005	3.0000e-005	2.1525
Maximum	**0.3975**	**3.4195**	**2.7106**	**9.8800e-003**	**0.3778**	**0.1033**	**0.4811**	**0.0968**	**0.0985**	**0.1953**	**0.0000**	**919.7493**	**919.7493**	**0.0842**	**0.0852**	**947.2519**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**23.98**	**0.00**	**19.85**	**18.80**	**0.00**	**10.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	1.7743	1.7743
2	**4-3-2022**	**7-2-2022**	0.6424	0.6424
3	**7-3-2022**	**10-2-2022**	0.6496	0.6496
4	**10-3-2022**	**1-2-2023**	0.7069	0.7069
5	**1-3-2023**	**4-2-2023**	0.3204	0.3204
		Highest	1.7743	1.7743

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	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	651.7633	651.7633	7.6200e-003	7.2900e-003	654.1272
Mobile	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Waste						0.0000	0.0000		0.0000	0.0000	14.8183	0.0000	14.8183	0.8757	0.0000	36.7118
Water						0.0000	0.0000		0.0000	0.0000	1.4875	8.4174	9.9048	0.1528	3.6100e-003	14.7992
Total	**1.3765**	**0.9930**	**5.8794**	**0.0132**	**1.1175**	**0.0362**	**1.1537**	**0.2981**	**0.0356**	**0.3337**	**16.3058**	**1,686.0169**	**1,702.3226**	**1.1162**	**0.0601**	**1,748.1474**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	651.7633	651.7633	7.6200e-003	7.2900e-003	654.1272
Mobile	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Waste						0.0000	0.0000		0.0000	0.0000	7.4092	0.0000	7.4092	0.4379	0.0000	18.3559
Water						0.0000	0.0000		0.0000	0.0000	1.4875	8.4174	9.9048	0.1528	3.6100e-003	14.7992
Total	**1.3765**	**0.9930**	**5.8794**	**0.0132**	**1.1175**	**0.0362**	**1.1537**	**0.2981**	**0.0356**	**0.3337**	**8.8966**	**1,686.0169**	**1,694.9135**	**0.6783**	**0.0601**	**1,729.7915**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**45.44**	**0.00**	**0.44**	**39.23**	**0.00**	**1.05**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/2/2022	5	3	
3	Grading	Grading	2/3/2022	2/10/2022	5	6	

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4	Building Construction	Building Construction	2/11/2022	12/15/2022	5	220	
5	Paving	Paving	12/16/2022	12/29/2022	5	10	
6	Architectural Coating	Architectural Coating	12/30/2022	1/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 279,750; Non-Residential Outdoor: 93,250; Striped Parking Area: 7,008 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

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Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	1,486.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	12,100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	127.00	50.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.1608	0.0000	0.1608	0.0244	0.0000	0.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.1608**	**8.3800e-003**	**0.1692**	**0.0244**	**7.8300e-003**	**0.0322**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2120**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**3.8800e-003**	**0.1318**	**0.0341**	**4.7000e-004**	**0.0142**	**9.4000e-004**	**0.0151**	**3.8900e-003**	**9.0000e-004**	**4.7900e-003**	**0.0000**	**47.0717**	**47.0717**	**2.4700e-003**	**7.3100e-003**	**49.3129**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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					0.0596	0.0000	0.0596	9.0200e-003	0.0000	9.0200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	**0.0169**	**0.1662**	**0.1396**	**2.4000e-004**	**0.0596**	**8.3800e-003**	**0.0680**	**9.0200e-003**	**7.8300e-003**	**0.0169**	**0.0000**	**21.0777**	**21.0777**	**5.3700e-003**	**0.0000**	**21.2119**

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	3.4300e-003	0.1314	0.0293	4.6000e-004	0.0128	9.3000e-004	0.0137	3.5100e-003	8.9000e-004	4.4000e-003	0.0000	45.8925	45.8925	2.4400e-003	7.2800e-003	48.1234
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	4.5000e-004	3.7000e-004	4.8300e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1792	1.1792	3.0000e-005	3.0000e-005	1.1896
Total	**3.8800e-003**	**0.1318**	**0.0341**	**4.7000e-004**	**0.0142**	**9.4000e-004**	**0.0151**	**3.8900e-003**	**9.0000e-004**	**4.7900e-003**	**0.0000**	**47.0717**	**47.0717**	**2.4700e-003**	**7.3100e-003**	**49.3129**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**2.3900e-003**	**8.9000e-004**	**3.2800e-003**	**2.6000e-004**	**8.2000e-004**	**1.0800e-003**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					8.8000e-004	0.0000	8.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	**2.0700e-003**	**0.0235**	**0.0151**	**4.0000e-005**	**8.8000e-004**	**8.9000e-004**	**1.7700e-003**	**1.0000e-004**	**8.2000e-004**	**9.2000e-004**	**0.0000**	**3.2321**	**3.2321**	**1.0500e-003**	**0.0000**	**3.2582**

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	4.0000e-005	3.0000e-005	4.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1089	0.1089	0.0000	0.0000	0.1098
Total	**4.0000e-005**	**3.0000e-005**	**4.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1089**	**0.1089**	**0.0000**	**0.0000**	**0.1098**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					0.0267	0.0000	0.0267	0.0111	0.0000	0.0111	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**0.0267**	**2.2300e-003**	**0.0290**	**0.0111**	**2.0500e-003**	**0.0132**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2721	0.2721	1.0000e-005	1.0000e-005	0.2745
Total	**0.0280**	**1.0703**	**0.2397**	**3.7600e-003**	**0.1044**	**7.5600e-003**	**0.1120**	**0.0287**	**7.2300e-003**	**0.0359**	**0.0000**	**373.9595**	**373.9595**	**0.0198**	**0.0593**	**392.1270**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					9.9000e-003	0.0000	9.9000e-003	4.1100e-003	0.0000	4.1100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	**4.6200e-003**	**0.0510**	**0.0277**	**6.0000e-005**	**9.9000e-003**	**2.2300e-003**	**0.0121**	**4.1100e-003**	**2.0500e-003**	**6.1600e-003**	**0.0000**	**5.4308**	**5.4308**	**1.7600e-003**	**0.0000**	**5.4747**

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	0.0279	1.0702	0.2386	3.7600e-003	0.1041	7.5600e-003	0.1116	0.0286	7.2300e-003	0.0358	0.0000	373.6874	373.6874	0.0198	0.0593	391.8525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	9.0000e-005	1.1100e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2721	0.2721	1.0000e-005	1.0000e-005	0.2745
Total	**0.0280**	**1.0703**	**0.2397**	**3.7600e-003**	**0.1044**	**7.5600e-003**	**0.1120**	**0.0287**	**7.2300e-003**	**0.0359**	**0.0000**	**373.9595**	**373.9595**	**0.0198**	**0.0593**	**392.1270**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4481	228.4481	0.0441	0.0000	229.5500
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4481**	**228.4481**	**0.0441**	**0.0000**	**229.5500**

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	0.0107	0.2828	0.0938	1.0800e-003	0.0347	2.5700e-003	0.0372	0.0100	2.4600e-003	0.0125	0.0000	105.0269	105.0269	3.5100e-003	0.0152	109.6292
Worker	0.0479	0.0399	0.5186	1.3700e-003	0.1531	1.0000e-003	0.1541	0.0407	9.2000e-004	0.0416	0.0000	126.7177	126.7177	3.6100e-003	3.4400e-003	127.8334
Total	**0.0586**	**0.3227**	**0.6124**	**2.4500e-003**	**0.1877**	**3.5700e-003**	**0.1913**	**0.0507**	**3.3800e-003**	**0.0540**	**0.0000**	**231.7445**	**231.7445**	**7.1200e-003**	**0.0186**	**237.4626**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	0.2041	1.6064	1.5789	2.7500e-003		0.0772	0.0772		0.0740	0.0740	0.0000	228.4478	228.4478	0.0441	0.0000	229.5497
Total	**0.2041**	**1.6064**	**1.5789**	**2.7500e-003**		**0.0772**	**0.0772**		**0.0740**	**0.0740**	**0.0000**	**228.4478**	**228.4478**	**0.0441**	**0.0000**	**229.5497**

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	0.0107	0.2828	0.0938	1.0800e-003	0.0347	2.5700e-003	0.0372	0.0100	2.4600e-003	0.0125	0.0000	105.0269	105.0269	3.5100e-003	0.0152	109.6292
Worker	0.0479	0.0399	0.5186	1.3700e-003	0.1531	1.0000e-003	0.1541	0.0407	9.2000e-004	0.0416	0.0000	126.7177	126.7177	3.6100e-003	3.4400e-003	127.8334
Total	**0.0586**	**0.3227**	**0.6124**	**2.4500e-003**	**0.1877**	**3.5700e-003**	**0.1913**	**0.0507**	**3.3800e-003**	**0.0540**	**0.0000**	**231.7445**	**231.7445**	**7.1200e-003**	**0.0186**	**237.4626**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6803	0.6803	2.0000e-005	2.0000e-005	0.6863
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6803**	**0.6803**	**2.0000e-005**	**2.0000e-005**	**0.6863**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2022

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	4.7100e-003	0.0467	0.0585	9.0000e-005		2.4400e-003	2.4400e-003		2.2500e-003	2.2500e-003	0.0000	7.7550	7.7550	2.4600e-003	0.0000	7.8165
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7100e-003**	**0.0467**	**0.0585**	**9.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.7550**	**7.7550**	**2.4600e-003**	**0.0000**	**7.8165**

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	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6803	0.6803	2.0000e-005	2.0000e-005	0.6863
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6803**	**0.6803**	**2.0000e-005**	**2.0000e-005**	**0.6863**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0441**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

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	4.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1134	0.1134	0.0000	0.0000	0.1144
Total	**4.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1134**	**0.1134**	**0.0000**	**0.0000**	**0.1144**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2022

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	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0000e-004	7.0000e-004	9.1000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1279
Total	**0.0441**	**7.0000e-004**	**9.1000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1279**

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	4.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1134	0.1134	0.0000	0.0000	0.1144
Total	**4.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1134**	**0.1134**	**0.0000**	**0.0000**	**0.1144**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.3963					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.3972**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	0.3963					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.6000e-004	5.8600e-003	8.1500e-003	1.0000e-005		3.2000e-004	3.2000e-004		3.2000e-004	3.2000e-004	0.0000	1.1490	1.1490	7.0000e-005	0.0000	1.1507
Total	**0.3972**	**5.8600e-003**	**8.1500e-003**	**1.0000e-005**		**3.2000e-004**	**3.2000e-004**		**3.2000e-004**	**3.2000e-004**	**0.0000**	**1.1490**	**1.1490**	**7.0000e-005**	**0.0000**	**1.1507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.8000e-004	3.8400e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9936	0.9936	3.0000e-005	3.0000e-005	1.0018
Total	**3.6000e-004**	**2.8000e-004**	**3.8400e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9936**	**0.9936**	**3.0000e-005**	**3.0000e-005**	**1.0018**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures 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					
Mitigated	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981
Unmitigated	0.6103	0.6275	5.5671	0.0110	1.1175	8.3900e-003	1.1259	0.2981	7.7800e-003	0.3059	0.0000	1,025.8257	1,025.8257	0.0800	0.0492	1,042.4981

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,045.00	1,023.75	743.75	2,383,614	2,383,614
Quality Restaurant	419.20	450.20	359.85	591,021	591,021
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,464.20	1,473.95	1,103.60	2,974,635	2,974,635

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Unenclosed Parking with	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Quality Restaurant	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374
Unenclosed Parking with Elevator	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	253.9588	253.9588	0.0000	0.0000	253.9588
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	253.9588	253.9588	0.0000	0.0000	253.9588
NaturalGas Mitigated	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	397.8045	397.8045	7.6200e-003	7.2900e-003	400.1685
NaturalGas Unmitigated	0.0402	0.3654	0.3070	2.1900e-003		0.0278	0.0278		0.0278	0.0278	0.0000	397.8045	397.8045	7.6200e-003	7.2900e-003	400.1685

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hotel	6.16193e+006	0.0332	0.3021	0.2537	1.8100e-003		0.0230	0.0230		0.0230	0.0230	0.0000	328.8238	328.8238	6.3000e-003	6.0300e-003	330.7778
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0402**	**0.3654**	**0.3070**	**2.1900e-003**		**0.0278**	**0.0278**		**0.0278**	**0.0278**	**0.0000**	**397.8045**	**397.8045**	**7.6200e-003**	**7.2900e-003**	**400.1685**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Hotel	6.16193e+006	0.0332	0.3021	0.2537	1.8100e-003		0.0230	0.0230		0.0230	0.0230	0.0000	328.8238	328.8238	6.3000e-003	6.0300e-003	330.7778
Quality Restaurant	1.29265e+006	6.9700e-003	0.0634	0.0532	3.8000e-004		4.8200e-003	4.8200e-003		4.8200e-003	4.8200e-003	0.0000	68.9807	68.9807	1.3200e-003	1.2600e-003	69.3906
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0402**	**0.3654**	**0.3070**	**2.1900e-003**		**0.0278**	**0.0278**		**0.0278**	**0.0278**	**0.0000**	**397.8045**	**397.8045**	**7.6200e-003**	**7.2900e-003**	**400.1685**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.58813e+006	202.4216	0.0000	0.0000	202.4216
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	226592	28.8813	0.0000	0.0000	28.8813
Total		**253.9588**	**0.0000**	**0.0000**	**253.9588**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	1.58813e+006	202.4216	0.0000	0.0000	202.4216
Quality Restaurant	177750	22.6559	0.0000	0.0000	22.6559
Unenclosed Parking with Elevator	226592	28.8813	0.0000	0.0000	28.8813
Total		**253.9588**	**0.0000**	**0.0000**	**253.9588**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	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	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Unmitigated	0.7260	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.7260**	**5.0000e-005**	**5.3800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	**0.7260**	**5.0000e-005**	**5.3800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0105**	**0.0105**	**3.0000e-005**	**0.0000**	**0.0112**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.9048	0.1528	3.6100e-003	14.7992
Unmitigated	9.9048	0.1528	3.6100e-003	14.7992

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.17085 / 0.352316	6.7674	0.1033	2.4400e-003	10.0774
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9048**	**0.1528**	**3.6100e-003**	**14.7992**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.17085 / 0.352316	6.7674	0.1033	2.4400e-003	10.0774
Quality Restaurant	1.51767 / 0.0968725	3.1375	0.0495	1.1700e-003	4.7218
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**9.9048**	**0.1528**	**3.6100e-003**	**14.7992**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4092	0.4379	0.0000	18.3559
Unmitigated	14.8183	0.8757	0.0000	36.7118

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	68.44	13.8927	0.8210	0.0000	34.4186
Quality Restaurant	4.56	0.9256	0.0547	0.0000	2.2932
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**14.8183**	**0.8757**	**0.0000**	**36.7118**

Hotel Rep Project Defaults - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	34.22	6.9464	0.4105	0.0000	17.2093
Quality Restaurant	2.28	0.4628	0.0274	0.0000	1.1466
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**7.4092**	**0.4379**	**0.0000**	**18.3559**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

APPENDIX D

Paleontological Resources Records Search Results

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

May 27, 2021

Michael Baker International
Attn: Margo Nayyar

re: Paleontological resources for the Rolling Hills Estates General Plan Update Project

Dear Margo:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Rolling Hills Estates General Plan Update project area as outlined on the portion of the Torrance and Redondo Beach USGS topographic quadrangles map that you sent to me via e-mail on May 19, 2021. We have several fossil localities from within the bounds of the project:

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3068	Hillside south of 5202 Kingspine Road	Monterey Formation (indurated silty to sandy shale)	Baleen whale (Cetotheriidae)	Surface
LACM VP 7925	Uncertain, possible Chadwick School, 26800 Academy Dr.	Monterey Formation (Altamira Shale)	Sperm whale (Physeteridae)	Unknown
LACM IP 42754-42759	Linden H Chandler Preserve, west of Buckskin Lane and LACM IP 42786 (33.77837, -118.33429)	Lomita Marl	Dwarf turbans (*Homalopoma luridum*), scallop (*Chlamys opuntia*), venus clam (*Saxidomus nuttali, Globivenus fordi*), horse clam (*Tresus nuttali*), carditid (*Glans carpenteri*), bittersweet (*Glycymeris septentrionalis*), turban snail (*Chlorostoma funebrals*), moon snail (Naticidae), cockle (*Nemocardium centifilosum*), lucines (*Epilucina californica*), whelk (*Kelletia kelleti*), murex snail (*Acanthinucella spirata*), and other unsorted specimens	Unknown
LACM IP 42786	89 Buckskin Lane, Rolling Hills Estates; Under Myaporum	Lomita Marl	Falsejingle (*Pododesmus*), scallop (*Argopecten ventricosus*), venus clam (*Amiantis callosa*), surf clam	Unknown

	tree on S side of pool beside house		(*Pseudomardium*)	
LACM IP 42789	Hillside in Linden H. Chandler Preserve adjacent to Buckskin Lane (33.77833, -118.3342)	Monterey Shale (Lomita Marl)	Red algae (Rhodophyta), echinoderm (Echinoidea), sea snails (*Lirobittium amillatum, L. quadrifilatum*), top snails (*Lirularia magna, L. pedroana; Norrisia norrisii*), murex snail (*Paciocinebrina foveolata. Caesia perpinguis*), dwarf turbans (*Homalopoma berryi, H. mimicum, H. luridum*), wentletrap (*Hirtoscala tinctum*), venus clam (*Leukoma staminea*), winkle (*Lacuna unifasciata*), carinate dove snail (*Alia carinata*), slipper snail (*Crepidula onyx*)	Surface
LACM IP 42801	Hillside along ravine facing NW on NE side of Linden H. Chandler Preserve adjacent to Buckskin Lane (33.77862, -118.33121)	Lomita Marl	Red algae (Rhodophyta), top snails (*Norrisia norrisii*), dwarf turbans (*Homalopoma luridum*), carditid (*Glans carpenteri; Cyclocardia occidentalis, C. ventricosa*), scallop (*Leopecten stearnsii, Chlamys opuntia*), luccinid clams (*Lucinoma annulatum*), top snails (*Lirularia*), turban snail (*Chlorostoma funebralis*, *Pomaulax gibberosa*), dove snails (*Alia carinata*), worm snails (*Petaloconchus compactus*)	Surface
LACM IP 7037	"Lomita Quarry", Linden H. Chandler Preserve (33.783, -118.331)	Lomita Marl	Top snails (*Lirularia*), triton (*Fusitriton*), barnacles (Sessilia), barley snail (*Pseudodiala*), wentletrap (*Hirtoscala*), echinoderm (Echinoidea), bryozoan (Bryozoa), scallop (*Leopecten diegensis*), hatchet shell (*Thyasira flexuosa*), tusk shell (*Gadila aberrans*)	Unknown
LACM IP 145, 146	"Chandler's Lime Pit"; Linden Chandler Preserve (33.78399,-118.32299)	Lomita Marl	Invertebrates (unspecified)	Unknown
LACM IP 152	An abandoned Lime Quarry 1 mile south of Chandler's Lime Pit	Lomita Marl	Invertebrates (unspecified)	Unknown

Additionally, we have numerous other fossil localities from the vicinity of the project area. The closest of these is shown in the table below.

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3354	Northwest bank of Agua Amarga Canyon, adjacent to Via Barcelona	Unknown formation (Pleistocene)	Bison (*Bison*)	Unknown
LACM VP 3159	Palos Verdes Hills; at a quarry on the highest hill one block south of Hawthorne Boulevard & two blocks west of Highridge Road	Monterey Formation (Altamira shale)	Fish (Osteichthyes)	Unknown
LACM VP 4284	Silver Spur School, 5500 Ironwood St, Rolling Hills Estates	Monterey Formation (Altamira Shale)	Baleen whale (Cetotheriidae)	Surface
LACM VP 5084, LACM IP 7005	In an open field at the end of Via Pinzon at the base of a bluff on the corporate boundary between Palos Verdes Estates & Walteria	Lomita Marl	Mackerel shark (Isurus); invertebrates: lucines (*Lucinoma, Epilucina*), tower shell (*Turritella*), spindle snail (*Barbarofusus*), turrid snail (*Antiplanes*), turban snail (*Pomaulax*), triton (*Fusitriton*), tellin (*Macoma*), frog shells (*Crossata*), corrugated clam (*Humilaria*), scallop (*Chlamys*), flasejingle (*Pododesmus*)	Unknown
LACM VP 3200	Long View Dr. in Green Hills Memorial Park	Unknpwn formation (conglomerate overlying Lomita Marl)	Bison (*Bison*), ground sloth (*Paramylodon*)	250 feet above mean sea level

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the Natural History Museum of Los Angeles County ("NHMLA"). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

APPENDIX E

Noise Data

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 173724
Project Name: Rolling Hills Estates GPU
Scenario: Existing

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Fehr & Peers
Community Noise Descriptor: L_{dn}: _____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.50%	12.90%	9.60%
Medium-Duty Trucks	84.80%	4.90%	10.30%
Heavy-Duty Trucks	86.50%	2.70%	10.80%

Analysis Condition		Median	ADT	Design Speed	Alpha	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Distance from Centerline of Roadway: CNEL at 100 Feet	Distance to Contour: 70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor								Dist
Silver Spur Road south of Kingspine Road	3	12	13,431	30	0.5	1.8%	0.7%	59.2	-	-	89	192	100
Palos Verdes Drive North west of Hidden Valley Road	2	12	18,688	35	0.5	1.8%	0.7%	61.6	-	59	128	276	100
Hawthorne Blvd south of Rolling Hills Road	4	14	30,300	45	0.5	1.8%	0.7%	66.4	57	124	266	574	100
Hawthorne Blvd south of Palos Verdes Drive North	4	14	30,006	45	0.5	1.8%	0.7%	66.3	57	123	265	570	100
Palos Verdes Drive North west of Crenshaw Blvd	2	12	21,626	40	0.5	1.8%	0.7%	63.6	-	80	173	372	100
Crenshaw Blvd north of Palos Verdes Drive North	4	16	26,688	45	0.5	1.8%	0.7%	65.9	53	114	245	529	100
Palos Verdes Drive North east of Eastvale Road	2	12	26,660	40	0.5	1.8%	0.7%	64.5	43	92	198	428	100
Rolling Hills Road north of Palomino Lane	2	0	9,988	35	0.5	1.8%	0.7%	58.9	-	39	84	181	100
Palos Verdes Drive East south of Club View Lane	2	10	10,758	20	0.5	1.8%	0.7%	55.0	-	-	46	100	100
Palos Verdes Drive North west of Strawberry Lane	2	14	33,727	45	0.5	1.8%	0.7%	66.7	60	130	279	602	100
Palos Verdes Drive East south of Palos Verdes Drive North	2	10	14,482	40	0.5	1.8%	0.7%	61.8	-	61	132	284	100
Hawthorne Blvd between Indian Peak Road & Silver Spur Road	4	12	31,311	40	0.5	1.8%	0.7%	65.3	-	105	226	487	100
Indian Peak Road south of Hawthorne Blvd	2	12	7,382	40	0.5	1.8%	0.7%	58.9	-	39	84	182	100
Silver Spur Road north of Roxcove Drive	4	14	12,651	35	0.5	1.8%	0.7%	60.1	-	-	101	218	100
Crenshaw Blvd north of Silver Spur Road	4	14	30,873	40	0.5	1.8%	0.7%	65.3	-	104	224	483	100
Highridge Road south of Country Lane	2	12	3,450	25	0.5	1.8%	0.7%	51.8	-	-	-	61	100

"-" = contour is located within the roadway right-of-way.

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 173724
Project Name: Rolling Hills Estates GPU
Scenario: Future low-build

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Fehr & Peers
Community Noise Descriptor: L_{dn}: _____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.50%	12.90%	9.60%
Medium-Duty Trucks	84.80%	4.90%	10.30%
Heavy-Duty Trucks	86.50%	2.70%	10.80%

				Design		Vehicle Mix		Distance from Centerline of Roadway					
Analysis Condition		Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				Calc
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL	Dist
Silver Spur Road south of Kingspine Road	3	12	14,390	30	0.5	1.8%	0.7%	59.5	-	-	93	201	100
Palos Verdes Drive North west of Hidden Valley Road	2	12	20,022	35	0.5	1.8%	0.7%	61.9	-	62	134	289	100
Hawthorne Blvd south of Rolling Hills Road	4	14	32,462	45	0.5	1.8%	0.7%	66.7	60	129	279	601	100
Hawthorne Blvd south of Palos Verdes Drive North	4	14	32,148	45	0.5	1.8%	0.7%	66.6	60	129	277	597	100
Palos Verdes Drive North west of Crenshaw Blvd	2	12	23,170	40	0.5	1.8%	0.7%	63.9	39	84	181	389	100
Crenshaw Blvd north of Palos Verdes Drive North	4	16	28,593	45	0.5	1.8%	0.7%	66.1	55	119	257	554	100
Palos Verdes Drive North east of Eastvale Road	2	12	28,564	40	0.5	1.8%	0.7%	64.8	45	96	208	448	100
Rolling Hills Road north of Palomino Lane	2	0	10,701	35	0.5	1.8%	0.7%	59.2	-	41	88	189	100
Palos Verdes Drive East south of Club View Lane	2	10	11,527	20	0.5	1.8%	0.7%	55.3	-	-	49	105	100
Palos Verdes Drive North west of Strawberry Lane	2	14	36,135	45	0.5	1.8%	0.7%	67.0	63	136	293	630	100
Palos Verdes Drive East south of Palos Verdes Drive North	2	10	15,517	40	0.5	1.8%	0.7%	62.1	-	64	138	298	100
Hawthorne Blvd between Indian Peak Road & Silver Spur Road	4	12	33,546	40	0.5	1.8%	0.7%	65.6	51	110	237	510	100
Indian Peak Road south of Hawthorne Blvd	2	12	7,910	40	0.5	1.8%	0.7%	59.2	-	41	88	190	100
Silver Spur Road north of Roxcove Drive	4	14	13,554	35	0.5	1.8%	0.7%	60.4	-	-	106	228	100
Crenshaw Blvd north of Silver Spur Road	4	14	33,077	40	0.5	1.8%	0.7%	65.6	-	109	235	506	100
Highridge Road south of Country Lane	2	12	3,696	25	0.5	1.8%	0.7%	52.1	-	-	-	64	100

"-" = contour is located within the roadway right-of-way.

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 173724
Project Name: Rolling Hills Estates GPU
Scenario: Future high-build

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Fehr & Peers
Community Noise Descriptor: L_{dn}: _____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.50%	12.90%	9.60%
Medium-Duty Trucks	84.80%	4.90%	10.30%
Heavy-Duty Trucks	86.50%	2.70%	10.80%

Analysis Condition		Median	ADT	Design Speed	Alpha	Vehicle Mix: Medium	Vehicle Mix: Heavy	Distance from Centerline of Roadway: CNEL at	Distance to Contour: 70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet					Dist
Silver Spur Road south of Kingspine Road	3	12	14,598	30	0.5	1.8%	0.7%	59.6	-	-	94	203	100
Palos Verdes Drive North west of Hidden Valley Road	2	12	20,313	35	0.5	1.8%	0.7%	62.0	-	63	135	292	100
Hawthorne Blvd south of Rolling Hills Road	4	14	32,934	45	0.5	1.8%	0.7%	66.7	61	131	282	607	100
Hawthorne Blvd south of Palos Verdes Drive North	4	14	32,613	45	0.5	1.8%	0.7%	66.7	60	130	280	603	100
Palos Verdes Drive North west of Crenshaw Blvd	2	12	23,506	40	0.5	1.8%	0.7%	63.9	39	85	182	393	100
Crenshaw Blvd north of Palos Verdes Drive North	4	16	29,008	45	0.5	1.8%	0.7%	66.2	56	120	260	559	100
Palos Verdes Drive North east of Eastvale Road	2	12	28,978	40	0.5	1.8%	0.7%	64.8	45	97	210	452	100
Rolling Hills Road north of Palomino Lane	2	0	10,857	35	0.5	1.8%	0.7%	59.2	-	41	89	191	100
Palos Verdes Drive East south of Club View Lane	2	10	11,694	20	0.5	1.8%	0.7%	55.4	-	-	49	106	100
Palos Verdes Drive North west of Strawberry Lane	2	14	36,659	45	0.5	1.8%	0.7%	67.1	64	137	295	636	100
Palos Verdes Drive East south of Palos Verdes Drive North	2	10	15,742	40	0.5	1.8%	0.7%	62.2	-	65	140	301	100
Hawthorne Blvd between Indian Peak Road & Silver Spur Road	4	12	34,033	40	0.5	1.8%	0.7%	65.7	51	111	239	515	100
Indian Peak Road south of Hawthorne Blvd	2	12	8,025	40	0.5	1.8%	0.7%	59.3	-	41	89	192	100
Silver Spur Road north of Roxcove Drive	4	14	13,751	35	0.5	1.8%	0.7%	60.4	-	-	107	230	100
Crenshaw Blvd north of Silver Spur Road	4	14	33,557	40	0.5	1.8%	0.7%	65.6	51	110	237	511	100
Highridge Road south of Country Lane	2	12	3,750	25	0.5	1.8%	0.7%	52.1	-	-	-	64	100

"-" = contour is located within the roadway right-of-way.

APPENDIX F

Transportation Assessment

Rolling Hills Estates 2040 General Plan

Transportation Assessment

Prepared for:
City of Rolling Hills Estates

October 2021

LA19-2943.01

FEHR PEERS

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Appendices

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1. Executive Summary

Fehr & Peers has completed a transportation assessment (TA) for the City of Rolling Hills Estates' 2040 General Plan (Project) in the City of Rolling Hills Estates, California.

The Project comprises of residential and commercial land uses for two buildout scenarios: Low-Buildout and High-Buildout. The *2040 Low-Buildout Project Scenario* includes 878 new housing in the City, including multifamily and accessory dwelling units (ADUs), and with a rezoning of existing commercial land uses resulting in a net decrease (15%) in commercial square footage when compared to the 2021 baseline. The *2040 High-Buildout Project Scenario* includes 2,159 new housing in the City, along with a small net decrease (9%) in commercial land uses when compared to the 2021 baseline. For both Project Scenarios, the housing is mostly comprised of multifamily and ADUs, and primarily concentrated in the Commercial District -followed by the north and northeast areas of the City. The total site area for the Project is the planning area Sphere of Influence (SOI), which includes the City boundary and portions of unincorporated County of Los Angeles.

This study was completed in support of the City's preparation of an Environmental Impact Report (EIR). Provided below is a description of metrics and scenarios analyzed in this study in coordination with the City of Rolling Hills Estates.

CEQA checklist

- Project consistency with City transportation-related plans, programs, ordinances, and policies
- Project VMT metrics compared to the existing citywide baseline
- Review of the circulation plan to assess potential geometric hazards
- Emergency access evaluation

Supplemental/Non-CEQA Operational Analysis

Project Level of Service (LOS) for the following scenarios were analyzed for Non-CEQA, informational purposes only.

- **Existing Year (2021) Baseline Conditions** – This constitutes the environmental setting for a traffic analysis. The most recent available traffic conditions and physical geometry were used to determine existing baseline conditions.

- **Cumulative Year (2040) without Project Scenarios** – Traffic conditions at the cumulative year of the project without the project scenarios. This scenario includes traffic generated by other proposed and/or pending projects in the study area. The Baseline Conditions traffic volumes were adjusted to account for ambient growth using a 0.4 percent annual growth rate (per the City's

socioeconomic forecast), followed by the inclusion of additional volumes generated by pending and approved projects proposed in the study area.

- **Cumulative Year (2040) Plus Project Scenarios** – Traffic generated from each of the proposed Project buildout scenarios was added onto the Cumulative Year 2040 No Project conditions to estimate Cumulative Year 2040 Plus Project conditions. This scenario was then compared to Cumulative Year 2040 No Project conditions to identify potential traffic effects resulting from the addition of the Project.

1.1 Major Findings

2040 General Plan Low-Buildout Project Scenario VMT Results

The 2040 General Plan Low-Buildout Scenario is projected to have a significant VMT impact for the residential VMT per capita and the work VMT per employee metric. The Project is projected to have a daily residential VMT per capita of 16.8, which is 5.6% below the 2021 base year citywide average (17.8 residential VMT per capita). This does not meet the City's significance threshold of being 15% or better than the base year. Additionally, the Project is projected to have a daily work VMT per employee of 17.3, which is 13.9% below the 2021 base year citywide average (20.1 work VMT per employee). However, the low-buildout scenario is 15% or better for the total VMT per service population. While the low-build scenario results in a net decrease in non-residential square footage (15%) compared to the 2021 baseline, and hence number of employees in the City, the City does not perform well for commuting trips given the existing imbalanced flow of workers, relatively long average commute trip lengths, and a lack of comparable/alternative modes of travel and infrastructure -including walking, biking, and/or taking transit.

After considering all viable transportation demand management (TDM) strategies to fully mitigate the Project VMT impact of the General Plan Low-Buildout Project Scenario, the Project results in a significant and unavoidable VMT impact. TDM strategies from the California Air Pollution Control Officers Association (CAPCOA) empirical research and policies outlined in the updated General Plan were closely considered. Nonetheless, while the Project results in a significant residential VMT per capita and work VMT per employee impact, the total VMT per service population does not result in a significant VMT impact.

2040 General Plan High-Buildout Project Scenario VMT Results

The 2040 General Plan High-Buildout Project Scenario is projected to have a significant VMT impact for the residential VMT per capita metric. The Project is projected to have a daily residential VMT per capita of 16.4, which is 7.9% below the 2021 base year citywide average (17.8 residential VMT per capita). This does not meet the City's significance threshold of being 15% or better than the base year. However, for the other VMT metrics, the High-Buildout Scenario is 15% or better for work VMT per employee and the total VMT per service population. The High-Buildout Scenario results in a significantly larger net increase in

total number of households when compared to the Low-Buildout Scenario, and given a proportion of the multifamily housing and accessory dwelling units (ADUs) will be built in low-VMT efficient areas (i.e., outside of the commercial district TAZ), this results in a significant VMT impact for the residential VMT per capita metric. Additionally, with the majority of the High-Buildout Scenario housing allocated to the commercial district, the work VMT per employee is no longer an impact given the City's improved housing-jobs balance, along with overall growing trends towards more telecommuting.

After considering all viable TDM strategies to fully mitigate the Project VMT impact of the General Plan High-Buildout Project Scenario, the Project results in a significant and unavoidable VMT impact. Nonetheless, while the Project results in a significant residential VMT per capita impact, the work VMT per employee and total VMT per service population do not result in a significant VMT impact. And overall, the High-Buildout Project Scenario performs better than the Low-Buildout Project Scenario with respect to total VMT per service population.

Other CEQA Project Findings

The Project Scenario features and location generally support multimodal transportation options and would be consistent with policies, plans, and programs that support alternative transportation, including the *Mobility Element, Housing Element,* and *Local Road Safety Plan.* Additionally, the Project Scenarios would not substantially increase hazards or conflicts, and would contribute to overall jobs/housing balance. Finally, the proposed Project Scenarios site access would not result in inadequate emergency access.

Supplemental Operational Analysis

Project Level of Service (LOS) analysis is presented for Non-CEQA, informational purposes only. The 2040 Low-Buildout Project Scenario is estimated to generate approximately 46,158 daily vehicle trips, and the 2040 High-Buildout Project Scenario is estimated to generate approximately 51,270 daily vehicle trips. Both scenarios are inclusive of baseline 2040 cumulative traffic.

Cumulative Year (2040) No Project Scenarios Traffic Level of Service (LOS)

The Cumulative Year (2040) No Project traffic conditions represent an estimate of future conditions without the proposed Project Scenarios inclusive of the ambient background growth and related projects traffic. All study intersections are projected to operate at LOS D or better, except for:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.
3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak only.

Cumulative Year (2040) Plus Project Scenarios Traffic Analysis

Low-Buildout Project Scenario

Ten of the twelve study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Cumulative Year (2040) Plus Low-Buildout Project Scenario conditions. The

following signalized intersections are projected to operate at LOS E in at least one of the peak hours under Cumulative Year (2040) Plus Low-Buildout Project Scenario conditions:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.
3. Crenshaw Boulevard & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak hour only.

The peak hour LOS/delay for several of the intersections improve under this scenario since there are fewer commercial trips (i.e., less commercial square footage).

High-Buildout Project Scenario

Eight of the twelve study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Cumulative Year (2040) Plus High-Buildout Project Scenario conditions. The following signalized intersections are projected to operate at LOS E in at least one of the peak hours under Cumulative Year (2040) Plus High-Buildout Project Scenario conditions:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.
3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak only.

Detailed intersection LOS worksheets for the study intersections are presented in **Appendix B**.

Cumulative Year 2040 Project Scenarios Effect

Per the City's intersection performance criteria and LOS standards, the addition of project traffic would be responsible for LOS deficiencies if a signalized intersection would degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of project trips in the opening year. . Intersections #2 and #3 under the **High-Buildout Project Scenario** do not result in a deficiency since these locations already operate at LOS E under the cumulative scenario and the increase in average delay is below the City performance criteria with the addition of Project trips. Therefore, the addition of Project trips under the High-Buildout Scenario would not be responsible for LOS deficiencies with respect to average delay at any of the study intersections.

None of the study intersections are projected to degrade from LOS D or better with the addition of project trips under the **Low-Buildout Project Scenario**. Recall that the Low-Buildout Scenario results in a net decrease in commercial square footage when compared to the cumulative 2040 baseline. Furthermore, at locations already operating with LOS E under cumulative year baseline conditions, the average delay decreases with the addition of project trips. Therefore, the addition of Project traffic under the Low-Buildout Scenario would not be responsible for LOS deficiencies with respect to average delay.

Cumulative Year (2040) Plus Project Scenarios Traffic with Roadway Improvements Qualitative Analysis

None of the Project Buildout Scenarios result in a LOS deficiency per the City's criteria. Therefore, no roadway improvements were analyzed.

2. Introduction

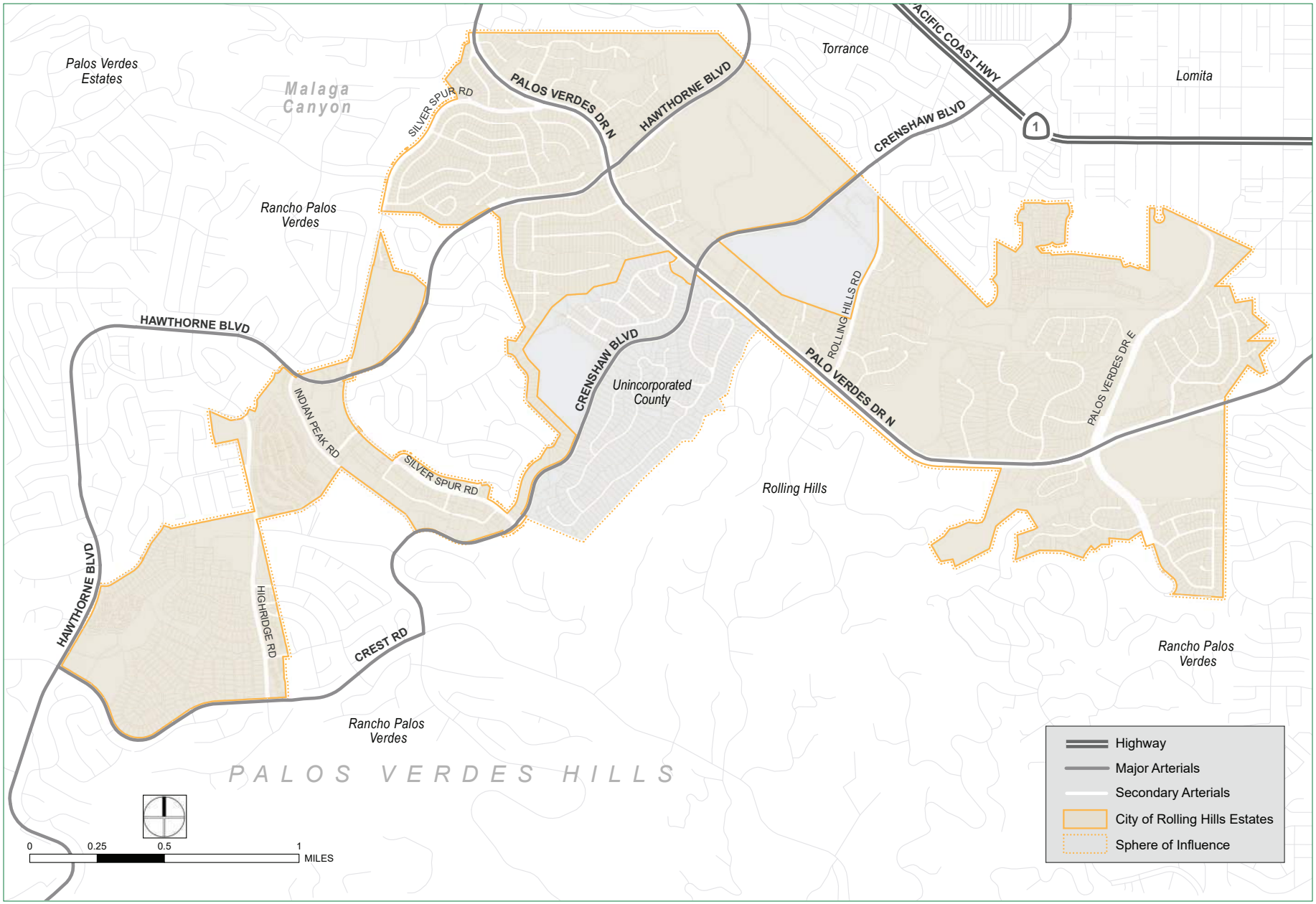
Fehr & Peers has completed a transportation assessment (TA) for the City of Rolling Hills Estates 2040 General Plan Update (Project) in the City of Rolling Hills Estates, California. This study was conducted to support the development of the Program Environmental Impact Report (EIR) by estimating potential transportation impacts of the Project. Note, the General Plan Update identifies future 2040 development in the City (residential and commercial uses) at the program level. The general location of the development is defined at the traffic analysis zone (TAZ) level and does not include site plans or other project-specific details such as parking supply. This report summarizes the methodology, findings, and conclusions of the analysis. This chapter outlines the transportation characteristics of the Project and the study area.

2.1 Project Description

The Project includes residential and commercial land uses for two buildout scenarios: Low-Buildout and High-Buildout. The 2040 Low-Buildout Project Scenario includes 878 new housing in the City, including multifamily and accessory dwelling units (ADUs), and with a rezoning of existing commercial land uses resulting in a net decrease in commercial square footage. The 2040 High-Buildout Project Scenario includes 2,159 new housing in the City, along with a small decrease in commercial land uses. For both Project Scenarios, the housing is mostly comprised of multifamily and ADUs, and is primarily concentrated in the Commercial District -followed by the north and northeast areas of the City. The total site area for the Project is the City boundary, as well as portions of Unincorporated Los Angeles County, which together form the Sphere of Influence (SOI) of the Planning Area for the General Plan. The City is located in the Palos Verdes Peninsula and is primarily accessed by Palos Verdes Drive North to the north, Hawthorne Boulevard to the west, Palos Verdes Drive South to the south, and Crenshaw Boulevard to the east. Silver Spur Road is the main access roadway for the Commercial District. Regional access to/from the City is provided via the Pacific Coast Highway (Highway 1) to the north, and the US I-110 freeway to the east.

The Project planning and study area is provided in **Figure 1**.

Figure 1 Project Study Area



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2017

2.2 Project Study Locations

The Project study area and analyzed intersections were determined based on trip generation, trip distribution, and trip assignment estimates developed for the Project. Traffic operations were evaluated at the following twelve intersections and sixteen road segments in the City as shown on **Figure 2**. The study locations were selected in consultation with the City of Rolling Hills Estates staff. Level of Service (LOS) analysis is presented for Non-CEQA, informational purposes only.

Study Intersections

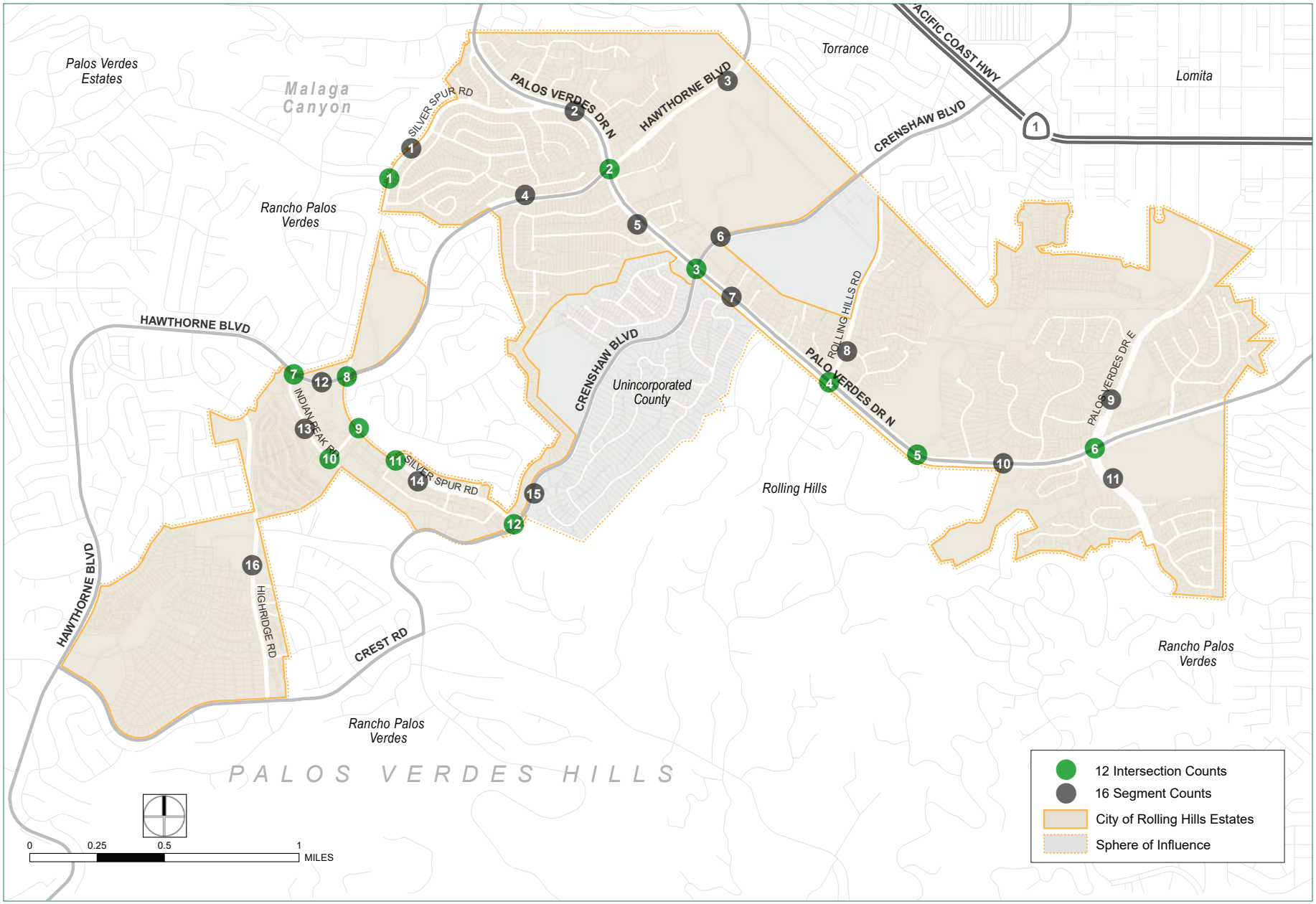
1. Silver Spur Road & Montemalaga Drive
2. Hawthorne Boulevard & Palos Verdes Drive North
3. Crenshaw Boulevard & Palos Verdes Drive North
4. Rolling Hills Road & Palos Verdes Drive North
5. Dapplegray Elementary Entrance & Palos Verdes Drive North
6. Palos Verdes Drive East & Palos Verdes Drive North
7. Indian Peak Road & Hawthorne Boulevard
8. Silver Spur Road & Hawthorne Boulevard
9. Silver Spur Road & Norris Center Drive
10. Indian Peak Road & Norris Center Drive
11. Silver Spur Road & Drybank Drive
12. Silver Spur Road & Crenshaw Boulevard

Study Road Segments

1. Silver Spur Road south of Kingspine Road
2. Palos Verdes Drive North west of Hidden Valley Road
3. Hawthorne Boulevard south of Rolling Hills Road
4. Hawthorne Boulevard south of Palos Verdes Drive North
5. Palos Verdes Drive North west of Crenshaw Boulevard
6. Crenshaw Boulevard north of Palos Verdes Drive North
7. Palos Verdes Drive North east of Eastvale Road
8. Rolling Hills Road north of Palomino Lane
9. Palos Verdes Drive East south of Club View Lane
10. Palos Verdes Drive North west of Strawberry Lane
11. Palos Verdes Drive East south of Palos Verdes Drive North

12. Hawthorne Boulevard between Indian Peak Road and Silver Spur Road
13. Indian Peak Road south of Hawthorne Boulevard
14. Silver Spur Road north of Roxcove Drive
15. Crenshaw Boulevard north of Silver Spur Road
16. Highridge Road south of Country Lane

Figure 2 Count Locations at Major Intersections & Road Segments in Rolling Hills Estates



3. Environmental Setting

This chapter discusses the environmental setting of the Project. It includes a description of the existing roadway configuration, as well as public transit, bicycle, and pedestrian facilities in the vicinity of the Project study area. The chapter also presents baseline traffic volumes at the study locations, as well as a cumulative list of related projects provided by the City.

3.1 Transportation Network & Safe Street Design

According to the 2019 American Community Survey, most Rolling Hills Estates residents drive alone to work – see **Table 1** below. Simultaneously, in public surveys conducted as part of the General Plan update, 75 percent of respondents stated that promoting sustainability was either very important or important for Rolling Hills Estates over the next twenty years.

Table 1: Rolling Hills Estates Commute Mode Split

Mode Choice	Rolling Hills Estates	Los Angeles County
Drive Alone	83.4%	74%
Carpool	6.1%	9.5%
Transit	0.9%	5.8%
Walk	0.2%	2.7%
Bike	0.2%	0.8%
Work from Home	8.9%	5.6%
Other	0.5%	1.6%

Source: American Community Survey, 2019 5-Year Estimates

The California Air Resources Board's 2018 emissions data by sector shows passenger vehicles as the single largest contributor to emissions in the state of California, making up 28 percent of the emissions in the State[1]. While it is anticipated that the use of automobiles in Rolling Hills Estates will remain high over the horizon of the General Plan, the Mobility Element's emphasis on providing a safe, multimodal transportation network that provides alternatives to single-occupancy vehicles is a demonstration of Rolling Hills Estates' commitment to sustainability and interest in maintaining alignment with State goals and regulations.

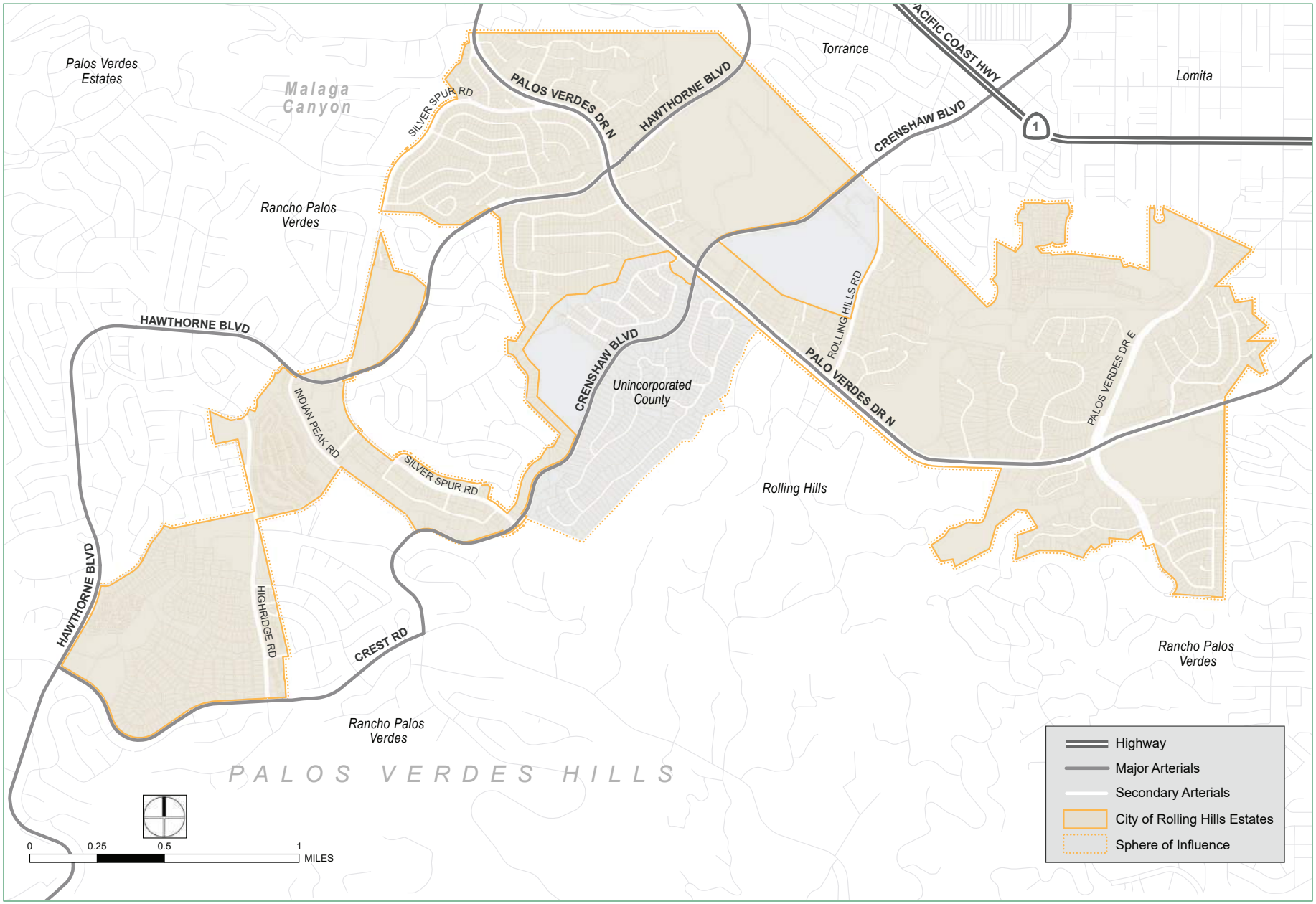
[1] 2020, *California Greenhouse Gas Emissions for 2008 to 2018: Trends of Emissions and Other Indicators*, ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf.

3.1.1 Roadway Classification

The transportation system in Rolling Hills Estates can be defined by three roadway typologies: major arterials, secondary arterials, and local streets. **Figure 3** presents the roadway network for Rolling Hills Estates and **Figure 4** presents the truck network for the City. **Table 2** provides a detailed description of each roadway classification.

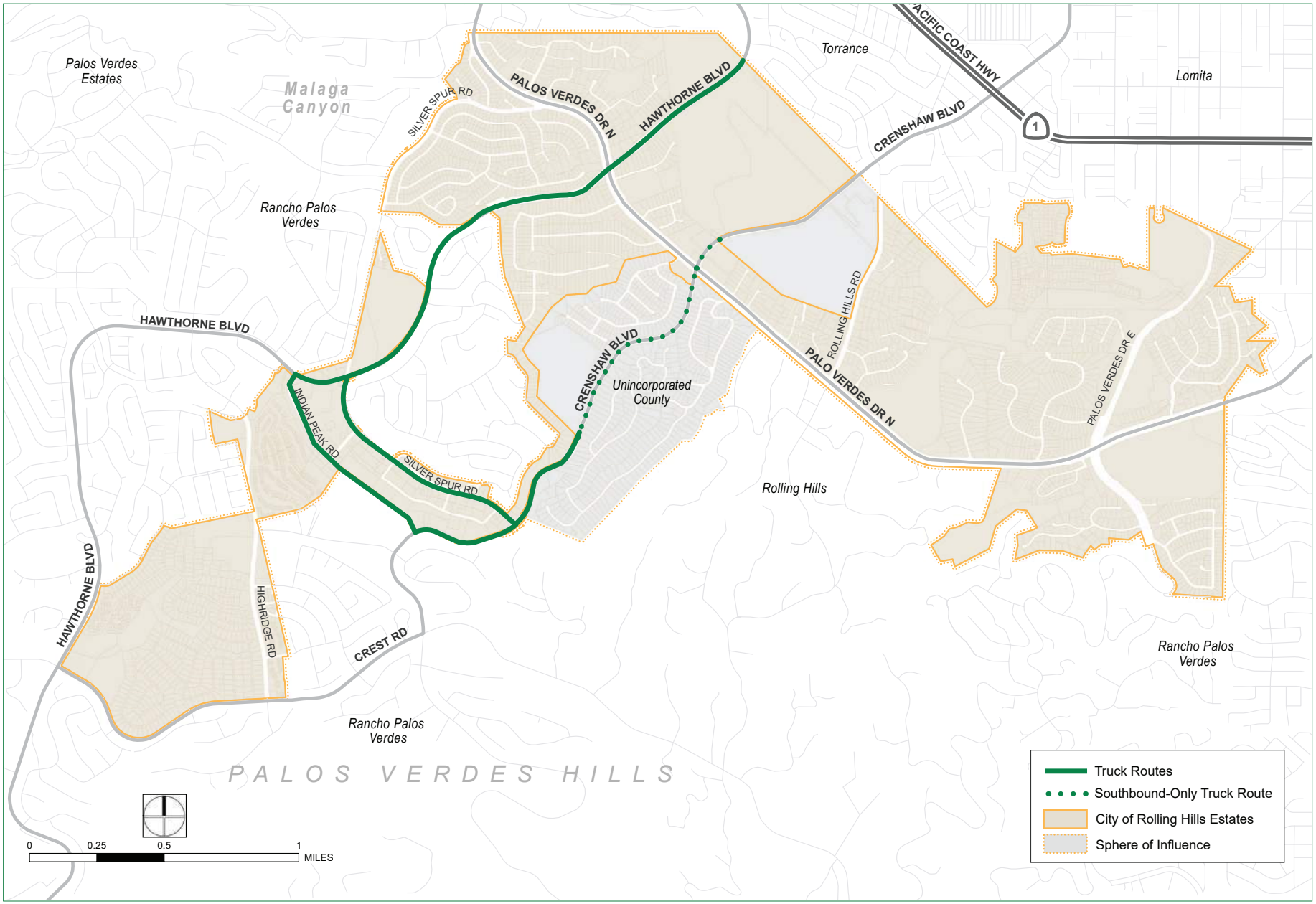
- **Arterial Roadways** are the backbone of transportation in the City and are designed to move large volumes of traffic, primarily serving regional destinations through connections to other arterials and freeways. Due to their regional focus, local access is a secondary priority and additional driveways and intersections should either be restricted or controlled. While auto use is emphasized on arterial roadways, transit, bike, and pedestrian facilities should be considered and accommodated.
    - **Major arterials** in Rolling Hills Estates are the most important for regional connectivity and road safety and efficiency should be prioritized. Major arterials in Rolling Hills Estates include Hawthorne Boulevard and Crenshaw Boulevard.
    - **Secondary arterials** in Rolling Hills Estates are designed to connect local streets to major arterials, as well as provide direct connections to local destinations such as schools and businesses. They typically have a smaller footprint than major arterials and include Palos Verdes Drive North, Silver Spur Road, Palos Verdes Drive East, Indian Peak Road, Rolling Hills Road, and Crest Road.
- **Local streets'** primary function is to provide direct access to residential parcels throughout the City. For this reason, through traffic should be discouraged and speeds should be managed. All other roadways in the City are classified as local streets.

Figure 3 Roadway Classi ications



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2017

Figure 4 Truck Network



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2017

Table 2: Rolling Hills Estates Roadway Classifications

	Major Arterials	Secondary Arterials	Local Streets
Access Emphasis	Regional facility access	Regional facility, local business, and school access	Residential parcel access
Right of Way	80'-100'	80'-100'	50'-60'
Roadway Width	60'-80'	60'-80'	32'-52'
Travel Lanes	2-4	2-4	2
Median	Yes	Yes	Not typical
Left Turn Signal Phase	All signalized intersections	All signalized intersections	Not typical
Sidewalk	Standard concrete sidewalk and curb and gutter **accommodated** on one or both sides.	Standard concrete sidewalk and curb and gutter **accommodated** on one or both sides.	Concrete, asphalt, or decomposed granite sidewalks with rolled curb **considered** on one or both sides.
Bike Facilities	Class I or IV facilities **considered**, depending on right of way and auto speed and volumes.	Class I, IV, or II facilities **considered**, depending on right of way and auto speed and volumes.	Class II or III facilities **considered**, depending on right of way and auto speed and volumes.
Roadways	Hawthorne Boulevard Crenshaw Boulevard	Palos Verdes Drive North Silver Spur Road Palos Verdes Drive East Indian Peak Road Rolling Hills Road Crest Road	All other roadways

To promote the safe and efficient delivery of goods, the City also maintains a list of allowable roadways for commercial truck usage.

3.1.2 Roadway Safety

The most effective approach to enhancing roadway safety is a data-driven approach that takes into account crash data to identify and implement countermeasures. Improving roadway safety not only improves the quality of life for residents in Rolling Hills Estates, but also creates an environment where residents feel more comfortable relying on active transportation modes to move around the City.

Collision data for Rolling Hills Estates was analyzed to understand the involvement, type, and factors of traffic collisions in the City. This analysis includes collisions between 2017-2019 except for January through November 2018, which were missing from the dataset. Collision data used for this analysis was obtained by the City from the Los Angeles County Sheriff's Department. This data was not yet available through the Statewide Integrated Traffic Records System at the time of the analysis.

Table 3 summarizes parties involved in vehicle collisions between 2017-2019. Bicycle and pedestrian injury collisions make up seven percent of all injury collisions, despite making up only 0.4 percent of commute trips in Rolling Hills Estates.

Table 3: Motor Vehicle Collision Summary by Involvement[1]

Collisions Involved With	Total Collisions	Property Damage Only Collisions	Injury Collisions		
			Fatal	Severe	Other Injury[2]
Other Motor Vehicle	158	95	0	1	62
Fixed Object[3]	54	31	1	3	19
Other[4]	7	5	0	0	2
Pedestrian	5	0	0	1	4
Bicycle	3	0	0	0	3
Total	**227**	**131**	**1**	**6**	**90**

Notes:
1. Available collision data provided by Sheriff's Department, 2017-2019. Collision data for January through November 2018 was not included in the provided dataset and therefore is not included in the analysis.
2. "Other Injury" collisions include collisions that results in an injury categorized as "Complaint of Pain" and "Other Visible Injury".
3. "Fixed Object" includes stationary objects such as parked cars, poles and signage, or structures.
4. "Other" category includes non-collisions and collisions with animals and other non-fixed objects.

Source: Fehr & Peers, 2021.

Table 4 summarizes crash types and **Table 5** presents the top five recorded causes of collisions. The top five recorded causes of collisions represent over 75 percent of collisions and include "improper turning", "unsafe speeds", "following too closely", auto right-of-way violation", and "traffic signals and signs". The leading cause of collisions is "improper turning", which primarily covers improper signaling, making a turn when it is unsafe, and illegal turns, including U-turns. "Unsafe speeds" is the second leading cause of collisions and the reported cause of the only fatal collision included in the data set.

Figure 5 presents a heatmap of the locations of collisions throughout Rolling Hills Estates.

Table 4: Summary of Crash Types[1]

Crash Type	Total Collisions	Property Damage Only Collisions	Injury Collisions		
			Fatal	Severe	Other Injury[2]
Rear-End	86	49	0	1	36
Hit Object	40	22	1	2	15
Broadside	39	20	0	1	18

Sideswipe	37	31	0	0	6
Other[3]	15	7	0	1	6
Head-On	8	1	0	0	7
Not Stated	2	1	0	0	2
Total	**227**	**131**	**1**	**5**	**90**

Notes:
1. Available collision data provided by Sheriff's Department, 2017-2019. Collision data for January through November 2018 was not included in the provided dataset and therefore is not included in the analysis.
2. "Other Injury" collisions include collisions that result in an injury categorized as "Complaint of Pain" and "Other Visible Injury".
3. "Other" includes pedestrian-vehicle collisions, overturns, non-collisions and other collision types.

Source: Fehr & Peers, 2021.

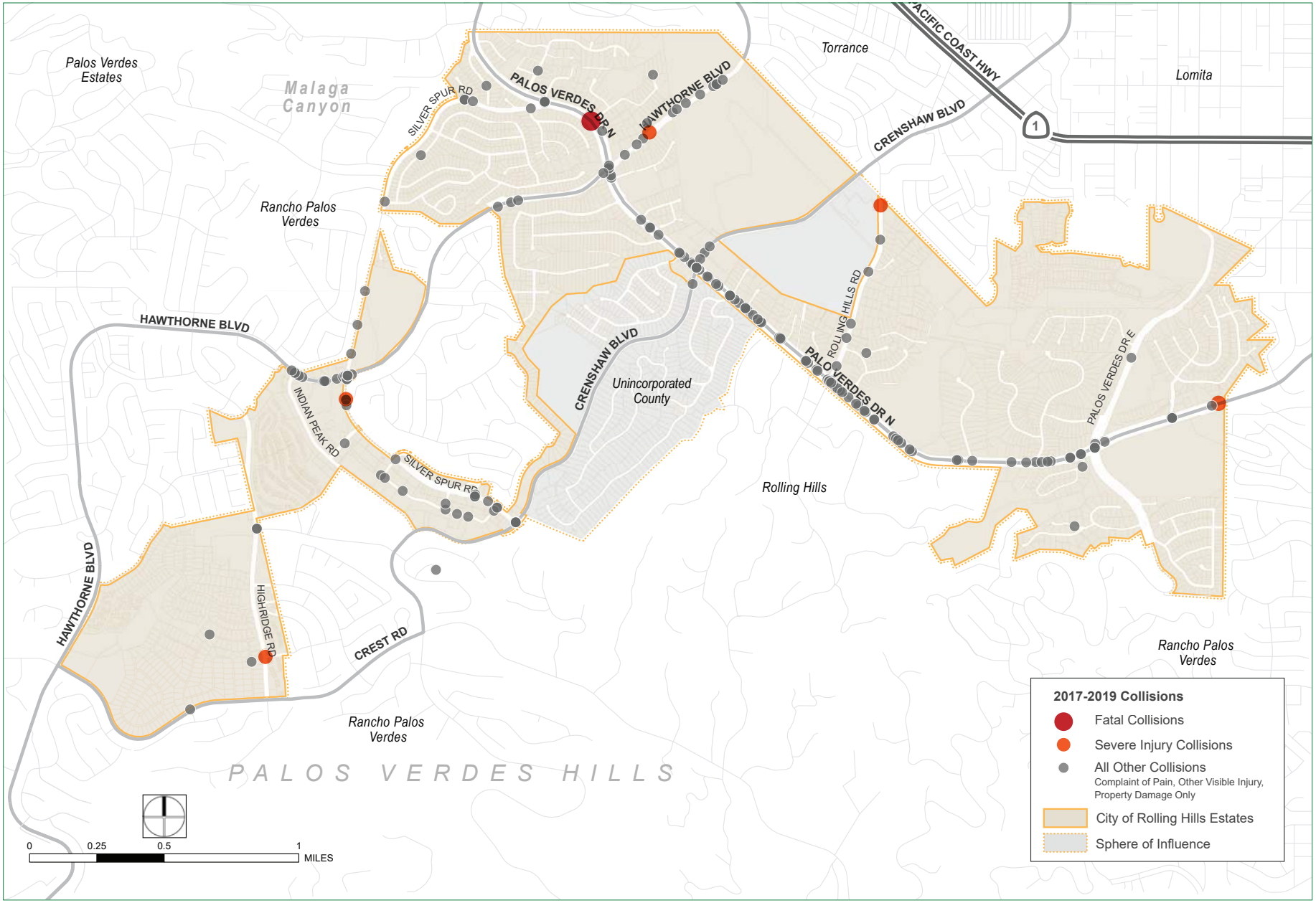
Table 5: Recorded Cause of Collisions[1]

	Total Collisions		Property Damage Only Collisions		Injury Collisions					
					Fatal		Severe		Other Injury [2]	
Stated Cause of Collision	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Improper Turning[3]	49	22%	30	23%	0	0%	3	60%	16	18%
Unsafe Speed[4]	44	19%	27	21%	1	100%	0	0%	16	18%
Following Too Closely[5]	38	17%	19	15%	0	0%	0	0%	19	21%
Auto Right-of-Way Violation[6]	25	11%	8	6%	0	0%	1	20%	16	18%
Traffic Signals and Signs[7]	17	7%	10	8%	0	0%	0	0%	7	8%
All Other Causes	54	24%	37	28%	0	0%	1	20%	16	18%
Total	**227**	**100%**	**131**	**100%**	**1**	**100%**	**5**	**100%**	**90**	**100%**

Notes:
1. Available collision data provided by Sheriff's Department, 2017-2019. Collision data for January through November 2018 was not included in the provided dataset and therefore is not included in the analysis.
2. "Other Injury" collisions include collisions that results in an injury categorized as "Complaint of Pain" and "Other Visible Injury".
3. "Improper turning" broadly refers to turn violations at intersections and turns off and on roadways, along with improper signaling during lane changes.
4. "Unsafe speeds" broadly refers to people driving at a speed that is not reasonable given roadway conditions.
5. "Following too closely" generally refers to drivers following another vehicle at a length that is not reasonable given roadway conditions.
6. "Auto right-of-way violation" broadly refers to any party not yielding to the driver's right-of-way or a driver improperly observing their right-of-way.
7. "Traffic signals and signs" broadly refers to drivers not observing the rules of a particular signal or sign.

Source: Fehr & Peers, 2021.

Figure 5 Collision Map



Source: Available collision data provided by Sheriff's Department, 2017-2019.

3.2 Automobile Circulation

Personal automobiles will likely remain the dominant mode choice for Rolling Hills Estates residents, employees and visitors throughout the planning horizon of the General Plan. Given this, maintaining efficient automobile circulation will be vital for maintaining quality of life in Rolling Hills Estates. In a public survey conducted for the General Plan update, over 75 percent of respondents stated that improving traffic congestion on city streets was either important or very important for the City. The Mobility Element sets multiple policies to do so, including leveraging new technologies in traffic management, promoting more efficient modes of travel to reduce the number of single-occupancy cars on the roadways, and maintaining level of service standards for intersections.

3.2.1 Key Terms

- **Level of Service (LOS)** is a metric commonly used to evaluate the average intersection delay experienced by people driving – see **Table 6** for LOS definitions. Used in isolation, it often fails to consider the experience of people walking and biking and can lead to planning decisions that have unintended consequences for the safety and wellbeing of roadway users. LOS is presented in this TA for Non-CEQA, informational purposes only.

Table 6: Level of Service Definitions

Level of Service (LOS)	LOS Definition
A	No vehicle waits longer than one red light and no approach phase is fully used.
B	An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

- **Vehicle Miles Traveled (VMT)** refers to vehicle miles traveled, a metric that accounts for the number of vehicle trips generated and the length or distance of those trips and is therefore directly related to fuel consumption and greenhouse gas emissions. Under SB 743, VMT is the required CEQA metric for transportation impact analysis and is generally expressed as VMT per capita or employment for a typical weekday. VMT shifts the focus from measuring impacts *to drivers* to measuring the impact *of driving,* providing a more comprehensive understanding of the

sustainability, mobility, and multimodal transportation outcomes related to transportation and land use development projects.

- **Intelligent Transportation Systems (ITS)** refers to a set of technologies that facilitate a connected, responsive transportation system. Applications of ITS include traffic signal coordination and adaptive signal prioritization that allow for the more efficient flow of traffic on major roadways and allow for the collection and dissemination of real-time information, including transit arrivals and traffic incident alerts. ITS will also be an invaluable tool in helping manage emerging technologies, including autonomous vehicles.
- **Traffic Calming** is the application of a series of roadway modifications aimed at reducing speeds, increasing safety, and reducing cut-through auto traffic. Other benefits to traffic calming include enhancing the street environment by creating more opportunities for landscaping and reducing the need for police enforcement. Typical traffic calming applications include the installation of speed humps, roundabouts, and stop controls.

3.2.2 Level of Service and Vehicle Miles Traveled

Given Rolling Hills Estates' overall development pattern and the likelihood for personal automobile use to remain the dominant mode choice in the City, LOS continues to be a useful measure of the localized effects of development and land use changes on the efficiency of auto circulation. However, with Rolling Hills Estates' commitment to sustainability, maintaining the rural character of the community, and multimodal mobility, it is particularly important that LOS standards, which can often lead to planning decisions that have unintended safety and community character consequences, are not the only measure used to evaluate the transportation network.

The Mobility Element seeks to maintain LOS outside of CEQA as an important evaluation tool for the City, while also elevating the use of VMT to more holistically understand the sustainability and overall mobility impacts of development in the City. Although LOS is no longer the metric under CEQA for determining a significant transportation impact, it is still being maintained by the City outside of the CEQA process.

Table 7 presents the LOS at major intersections throughout the City using HCM 6th edition and will act as a baseline for future development. The intersection counts were originally collected in 2017 (pre-COVID) and adjusted accordingly to reflect background growth by applying a 0.4% annual growth rate factor. As shown in Table 7, the AM peak hour is the period that experiences the most delay, compared to the PM peak hour. All study intersections operate at LOS D or better in the existing base year (2021) conditions, except for Hawthorne Boulevard & Palos Verdes Drive North (intersection #2) in the AM peak, and Rolling Hills Estates Road & Palos Verdes Drive North (intersection #4) in the AM peak. **Table 8** shows the existing average daily traffic volumes for the sixteen study road segments in the City of Rolling Hills Estates. The road segment counts were originally collected in 2017 (pre-COVID) and adjusted accordingly to reflect background growth by applying a 0.4% annual growth rate factor

Table 7: Existing Intersection LOS (2021 Base Year) for Rolling Hills Estates

ID	Signalized Study Intersection	Peak Period	Existing 2021 Base Year	
			Avg. Delay (sec/veh)	LOS
1	Silver Spur Rd. & Montemalaga Dr.	AM	12.9	B
		PM	8.8	A
2	Hawthorne Blvd. & Palos Verdes Dr. North	AM	71.5	E
		PM	28.1	C
3	Crenshaw Blvd. & Palos Verdes Dr. North	AM	46.0	D
		PM	29.9	C
4	Rolling Hills Estates Road & Palos Verdes Dr. North	AM	65.3	E
		PM	42.8	D
5	Palos Verdes Dr. North & Dapplegray Elementary Entrance	AM	16.0	B
		PM	7.1	A
6	Palos Verdes Dr. East & Palos Verdes Dr. North	AM	23.0	C
		PM	23.7	C
7	Indian Peak Rd. & Hawthorne Blvd.	AM	12.0	B
		PM	12.0	B
8	Silver Spur Rd. & Hawthorne Blvd.	AM	48.1	D
		PM	44.4	D
9	Silver Spur Rd. & Norris Center Dr./Driveway	AM	9.1	A
		PM	9.0	A
10	Indian Peak Rd. & Driveway/Norris Center Dr.	AM	15.9	B
		PM	15.7	B
11	Drybank Dr./Bart Earle Way & Silver Spur Rd.	AM	28.9	C
		PM	30.1	C
12	Crenshaw Blvd. & Silver Spur Rd./Driveway	AM	19.8	B
		PM	23.6	C

Source: *Fehr & Peers, 2021.*

Table 8: Existing Average Daily Traffic (2021 Base Year) for Rolling Hills Estates

ID	Road Segment	Average Daily Traffic (ADT)
1	Silver Spur Rd. south of Kingspine Rd.	13,400
2	Palos Verdes Dr. North west of Hidden Valley Rd.	18,700
3	Hawthorne Blvd. south of Rolling Hills Rd.	30,300
4	Hawthorne Blvd. south of Palos Verdes Dr. North	30,000
5	Palos Verdes Dr. North west of Crenshaw Blvd.	21,600
6	Crenshaw Blvd. north of Palos Verdes Dr. North	26,700
7	Palos Verdes Dr. North east of Eastvale Rd.	26,650
8	Rolling Hills Rd. north of Palomino Ln.	10,00
9	Palos Verdes Dr. East south of Club View Ln.	10,750
10	Palos Verdes Dr. North west of Strawberry Ln.	33,700
11	Palos Verdes Dr East south of Palos Verdes Dr. North	14,500
12	Hawthorne Blvd. between Indian Peak Rd. & Silver Spur Rd.	31,300
13	Indian Peak Rd. south of Hawthorne Blvd.	7,400
14	Silver Spur Rd. north Roxcove Dr.	12,650
15	Crenshaw Blvd. north of Silver Spur Rd.	30,900
16	Highridge Rd. south of Country Ln.	3,450

Source: *Fehr & Peers, 2021.*

3.2.2.1 Existing VMT Summary

The 2016 SCAG RTP/SCS travel demand model was used to estimate the amount of average weekday VMT for the City of Rolling Hills Estates and other cities and counties across Southern California within the six county SCAG region. The SCAG model for the 2012 Base Year and 2040 Baseline scenarios was updated with land use information from the City of Rolling Hills Estates to produce the VMT estimates.

The VMT estimates were calculated using the origin-destination methodology to capture the total VMT generated by residents and employees within the Planning Area. Due to limitations in the SCAG travel model, VMT generated by heavy duty truck trips or unique land uses (airports, seaports, and external gateways) are not included in these estimates.

Table 9 shows the existing VMT for the City of Rolling Hills Estates for home based generated trips and work based attracted trips.

Table 9: Existing Vehicle Miles Traveled (2021 Base Year) for Rolling Hills Estates

VMT Metric	City Base Year (2021)
Average Daily VMT per Service Population	45.3
Average Daily Home-Based VMT per Capita	17.8
Average Daily Home-Based Work VMT per Employee	20.1

Source: *Fehr & Peers, 2021 – via data from the SCAG 2016 RTP/SCS Model.*

3.2.3 Parking

Parking is a necessary component of mobility and providing for adequate and appropriately located parking is an important consideration in both existing and future development. The City also realizes that as new mobility options come online and gain traction, demands for parking may shift. Important parking considerations for Rolling Hills Estates moving forward will include providing adequate electric vehicle (EV) and alternative fuel parking spaces, spaces for horses, bike parking, and Neighborhood Electric Vehicle (e.g., golf carts) parking as these modes gain popularity. The demand for parking should also be balanced with the demand and value of land in Rolling Hills Estates. Strategies such as right-sizing parking space sizes and prioritizing garages over surface lots will help the City balance their need for parking with the value for land and help reduce the urban heat island effect created by excessive asphalt. A parking study conducted in 2021 by Michael Baker International for Rolling Hills Estates (Chapter 2 of the Land Use Element in the General Plan) found in the Commercial District:

- The total parking supply is 6,342 spaces: 474 on-street and 5,868 off-street parking spaces. The minimum parking needs based on current City code requirements is 5,925 parking spaces.
- A comparison of City parking requirements to industry standard parking rates shows that the City's rates are overly conservative and result in excessive parking supply.
- Parking rates that are unnecessarily higher tend to disincentivize developers to the area.
- With the goal of rejuvenating and revitalizing the Commercial District, modified parking rates have been recommended.

- Based on ITE and ULI research, it is estimated that the existing Commercial District land uses would need a total of 5,292 spaces, which means the City is currently experiencing a surplus of 576 spaces, or 10.9%.
- Under future build-out conditions, there is a remaining surplus of 348 parking spaces within the Commercial District.
- With the ability to share parking between a mix of adjacent land uses, peak parking demand can be reduced. Within the Commercial District, this reduction is estimated at up to 20 percent, which results in an additional surplus of parking.
- Additionally, future on-street parking modifications may be made, including the extension of Deep Valley Drive as well as the conversion of parallel parking to angle parking on Silver Spur Road, which would further increase the overall parking supply.
- With the projection of a parking surplus, the City has the flexibility to reduce new parking standards for developers in redevelopment areas.

3.2.4 Pedestrian Facilities

Pedestrian circulation and access within Rolling Hills Estates is provided primarily through sidewalks, crosswalks, and pedestrian trails found throughout the City along major/secondary arterials, although many local residential streets in neighborhoods across the City do not have sidewalks. Mixed-use paths and bridle trails also serve as pedestrian facilities along arterials, including along portions of Palos Verdes Drive North and Hawthorne Boulevard. Discontinuous sidewalks, steep grades, long distances between crossings and high auto speeds can make it difficult and uncomfortable to navigate Rolling Hills Estates as a pedestrian. In addition to traffic calming and road safety measures, the Mobility Element aims to improve the pedestrian realm through:

- **Sidewalk continuity:** Continuous and uniform sidewalks should be provided along arterials to promote walkability and improve pedestrian safety in Rolling Hills Estates. This is particularly important for people who require mobility assistance or those pushing strollers. Sidewalk gaps currently exist along Hawthorne Boulevard and Crenshaw Boulevard.
- **Context-sensitive sidewalk and curb design:** Rolling Hills Estates takes pride in its distinctive rural feel and sidewalk design should be in line with its character. New sidewalks along local streets should consider concrete, asphalt, or decomposed granite (DG) sidewalks with a rolled curb before considering a standard concrete curb and gutter design. In neighborhoods without sidewalks and without enough right-of-way for installation, consider implementing a sidewalk on just one side of the street and employ traffic calming measures to slow automobile speeds and improve the pedestrian environment. Sidewalks along arterials and in the Commercial District should include a concrete curb and gutter design, wider sidewalks to allow for two people to comfortably walk side-by-side, and a landscaped buffer between the sidewalk and the roadway.
- **Uniform and data-driven crosswalk policy:** Wide roads, large curb radii, and high vehicle speeds increase pedestrian exposure and can create an uncomfortable crossing environment for pedestrians throughout Rolling Hills Estates. A uniform, data-driven approach to adding and

enhancing both signalized and unsignalized crossings will improve pedestrian safety and create consistency across the City.

- **Enhanced facilities in the Commercial District:** Creating a more walkable, pedestrian-oriented Commercial District will increase foot traffic to local businesses and help elevate the district as a major destination in the region. A pedestrian greenway concept and other pedestrian amenities should be explored through a Complete Streets study of Silver Spur Road.

3.3 Recreational Trails & Bicycle Circulation

Biking and horseback riding have always been popular forms of recreation in Rolling Hills Estates. While they will likely remain a popular form of recreating throughout the horizon of the General Plan, it is also the intention of the City to promote biking and horseback riding as not only recreation, but viable transportation options as well. In an effort to do so, key barriers to biking and horseback riding are addressed in the Mobility Element:

- **Topography:** Topographic constraints in Rolling Hills Estates are a barrier to many who may be interested in using their bikes for shorter trips but are nervous about tackling the steeper grades in some parts of the City. Promoting the use of e-bikes and utilizing transit for uphill segments are both possible solutions for mitigating this issue.
- **Connected network:** Rolling Hills Estates has approximately 10 miles of designated bike facilities and 25 miles of bridle trails (over 30 miles if you include the SOI). However, there is a significant network gap in connections between the Commercial District and residential neighborhoods. LA Metro's *Active Transportation Strategic Plan* includes a proposed Class I bike path on Crenshaw Boulevard that would help close this gap. California Vehicle Code permits equestrian use of roadways.
- **Biking and equestrian amenities:** Limited biking and equestrian amenities at major destinations is another known barrier to active transportation mode choice in the City. Providing amenities such as parking, wayfinding, water for horses, and bike fix-it stations can amplify these modes as viable, supported alternatives to driving.
- **Education and marketing:** Biking and equestrian facilities should be effectively marketed so residents and visitors are aware of the resources available to them, including how to access resources and the benefits they provide, such as benefits to public health, sustainability, and traffic congestion alleviation.

3.3.1 Key Terms

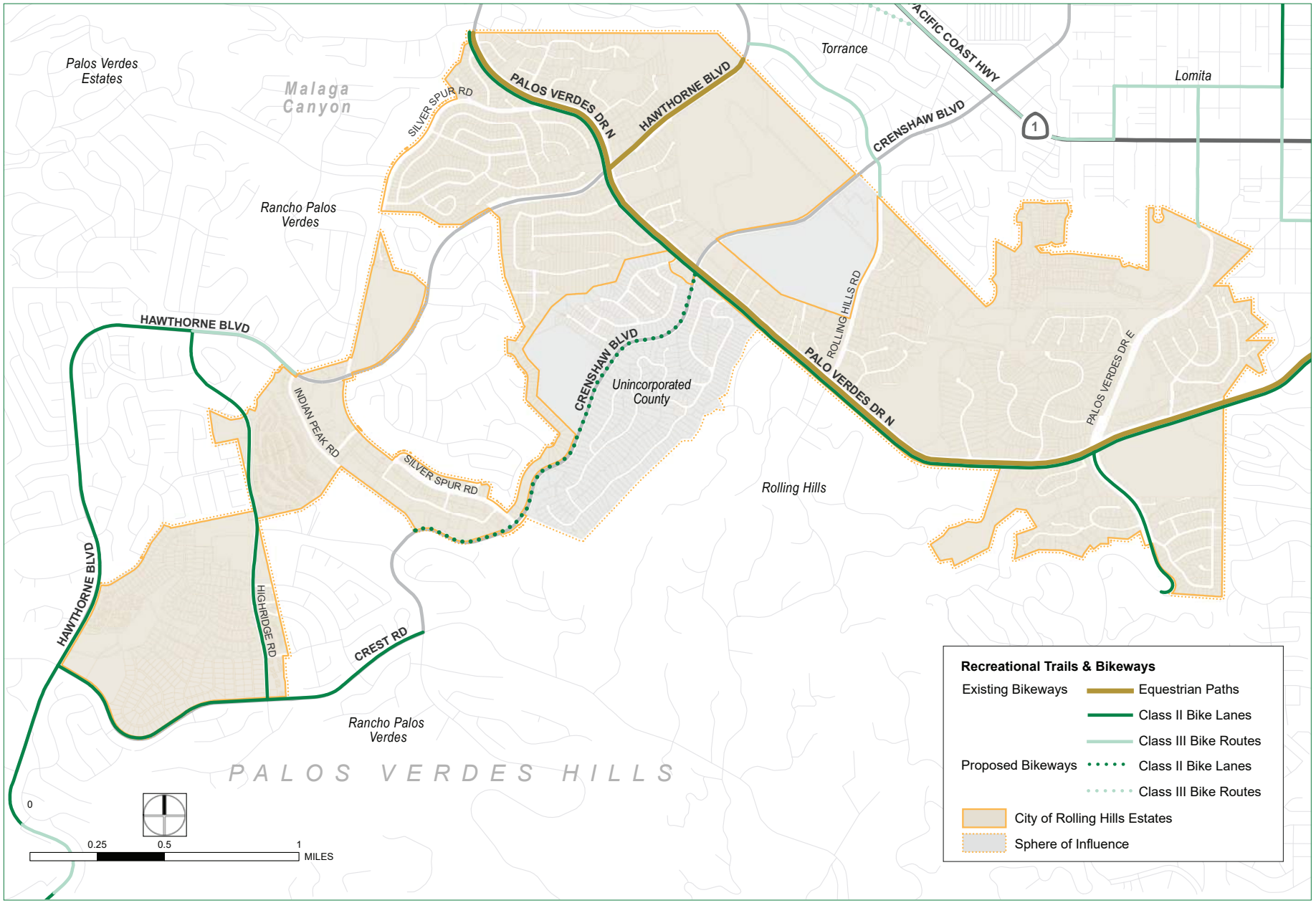
- **Class I Bike Paths:** Class I bike paths provide a completely separated right-of-way for the exclusive use by bicycles and pedestrians.
- **Class II Bike Lanes:** Class II bike lanes are striped lanes that provide dedicated space for bicyclists on the roadway adjacent to automobile and bus traffic. Class II facilities include buffered bike lanes, which provides additional striping to further separate bikes and automobiles.

- **Class III Bike Routes:** Class III bike routes are shared-use roadways where automobiles and bikes mix in the travel lane.
- **Class IV Bikeways:** Class IV bikeways are on-street bike lanes that are physically separated from the adjacent travel lane. Class IV bikeways include parking-protected bike lanes, where the bike lane is positioned between the parking lane and the curb.
- **Bridle Trails:** Bridle trails are off-street equestrian facilities for use by equestrians and pedestrians. Cyclists are typically restricted on bridle trails in Rolling Hills Estates.

3.3.2 Equestrian and Bicycle Facilities

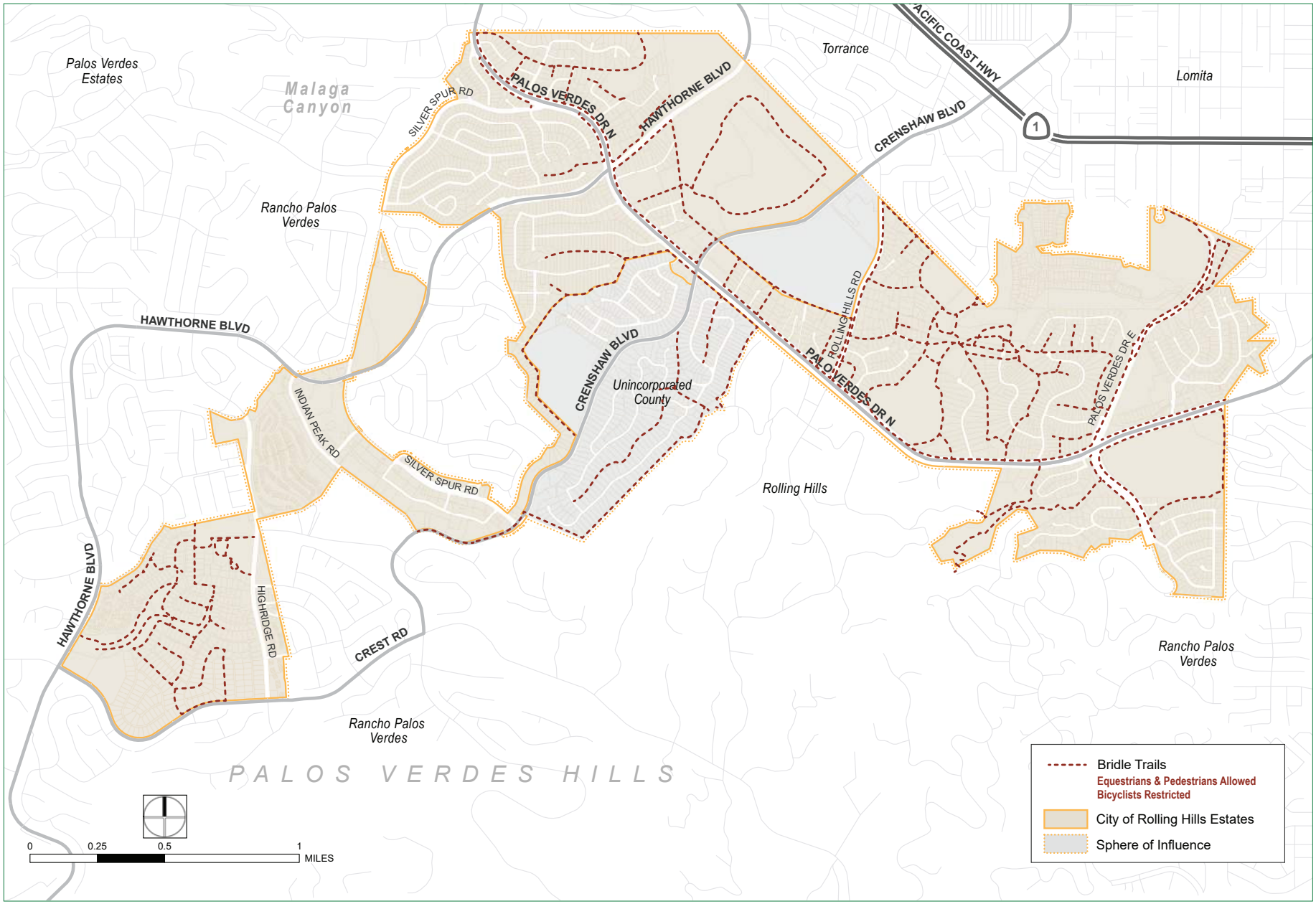
Equestrian and bicycle facilities in Rolling Hills Estates includes approximately 10 miles of designated bike facilities, over 25 miles of bridle trails, some bike and horse parking, and equestrian crossings on Rolling Hills Road and Palos Verdes Drive North. While pedestrians are permitted to use bridle trails, cyclists are restricted as horses can be startled easily and may be unpredictable if they perceive approaching bicyclists as a danger. **Figure 6** shows the planned and proposed bike facilities in Rolling Hills Estates. New and proposed facilities should be sensitive to the rural character of Rolling Hills Estates in their design, limiting the use of excessive striping. **Figure 7** shows the existing bridle trails throughout Rolling Hills Estates.

Figure 6 Existing & Proposed Bike Facilities



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2017

Figure 7 Bridle Trails



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2017

3.4 Transit & Transportation Demand Management

Transit and Transportation Demand Management (TDM) are vital components to reducing automobile dependency and traffic congestion and increasing mobility and sustainability. Given the land use and geographic characteristics of Rolling Hills Estates, it is not expected that a significant number of automobile trips will be replaceable with other transportation modes. However, to best identify alternative strategies that will work for Rolling Hills Estates, three distinct trip types were identified:

- **Getting to School:** Traffic congestion in Rolling Hills Estates often hits its peak during student pick-up and drop-off, especially on Palos Verdes Drive North. Safe Routes to School programs that provide information to parents and introduce students to carpooling, transit, walking, and biking at a young age can help take cars off the road during the peak hours and build healthy habits early on.
- **Leisure trips around Town:** Most residents rely on their personal automobiles even for short trips around town, including going to the grocery store, visiting friends, or visiting parks and trail heads. Active transportation and transit options that provide better mobility options around Rolling Hills Estates, especially to and from the Commercial District, may help curb automobile dependency for these shorter trips.
- **Commute Trips:** Rolling Hills Estates is geographically isolated from most major employment centers in the Los Angeles area. Given this, transit and TDM options to get to work are limited and often very time intensive. However, other types of commuting trips, such as to major medical centers or shopping districts outside of Rolling Hills Estates may be better suited for transit and TDM strategies.

3.4.1 Key Terms

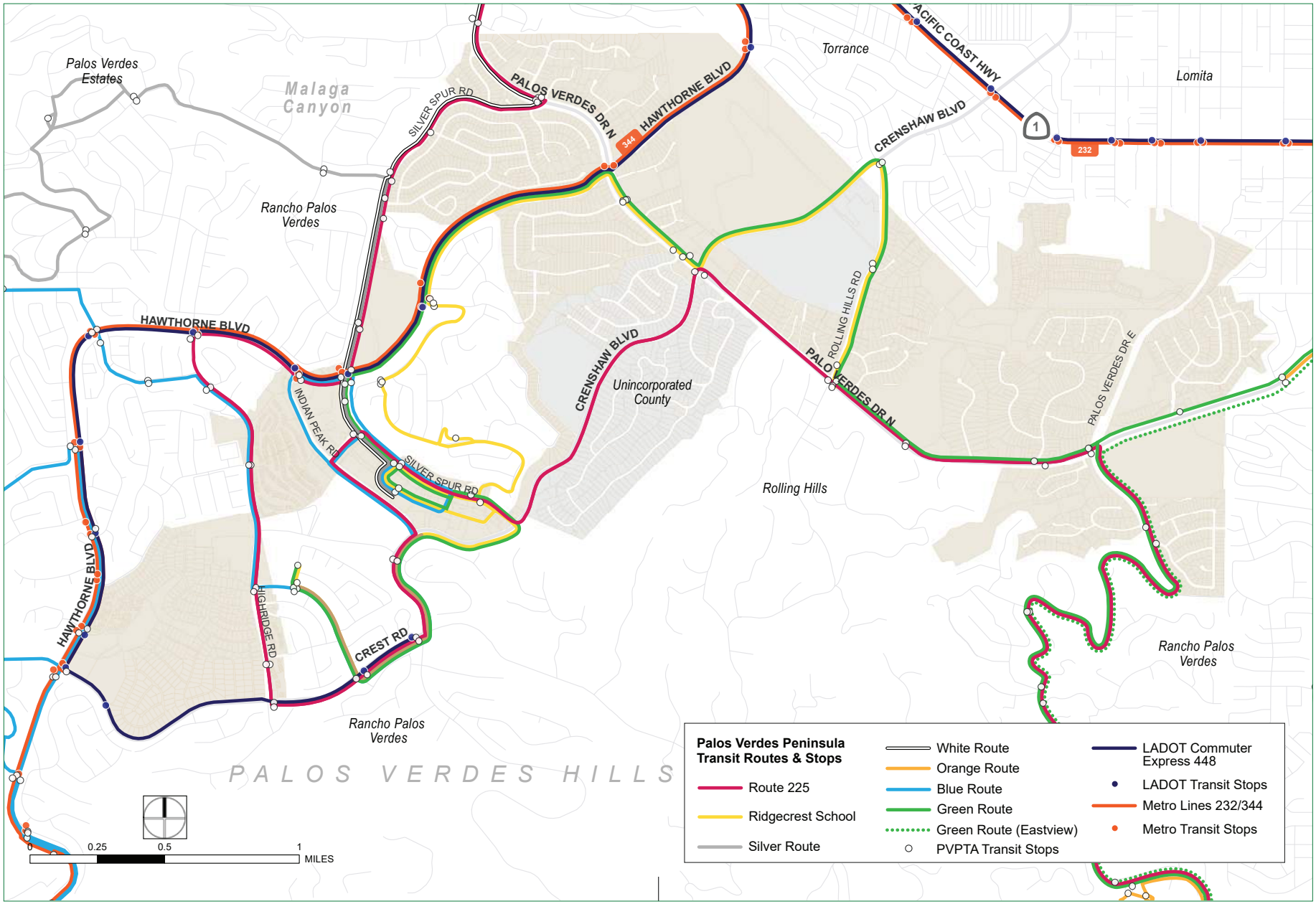
- **Transportation Demand Management** is a set of proven strategies aimed at incentivizing and promoting transportation alternatives other than the single-occupancy vehicle. Its intent is to provide people with a wide variety of convenient and cost- and time-competitive options that reduce the dependence on the personal automobile. TDM strategies that could be successful in Rolling Hills Estates include:
    - **Remote Work:** Telecommuting is already popular in Rolling Hills Estates, with a greater share of residents working from home compared to the County as a whole. Continuing to promote remote work will reduce traffic congestion during peak commute times.
    - **Commute Trip Reduction (CTR) Programs:** These are voluntary programs that include services such as carpool encouragement and ride-matching assistance for residents who work in the same employment center or in close proximity. This type of program could be implemented through partnerships with employers or Homeowner's Associations (HOAs).
    - **Vanpools:** Vanpools can be coordinated by employers or HOAs.
    - **Demand-Responsive Parking Pricing:** Dynamic parking pricing can incentivize use of other modes, especially for shorter trips.

- **Bikeshare:** Bikeshare, especially e-bike share, can simplify bike use for residents and reduce barriers to biking, including personal bike maintenance and topographic constraints.

3.4.2 Transit Facilities

Rolling Hills Estates is served by three different transit providers: LA Metro, Los Angeles Department of Transportation (LADOT) DASH, and Palos Verdes Peninsula Transit Authority (PVPTA). Metro Line 344 connects to the Harbor Gateway Transit Center, which provides connections to Downtown Los Angeles via the Metro Silver Line. LADOT also provides service to Downtown Los Angeles with a Commuter Express route that operates during the morning and evening peak hours only. PVPTA provides more localized weekday-only service with connections throughout the Palos Verdes Peninsula. **Figure 8** shows existing transit lines and stops in Rolling Hills Estates.

Figure 8 Transit Lines & Stops



Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data, 2021; Los Angeles GTFS Data, 2021; Fehr & Peers 2021

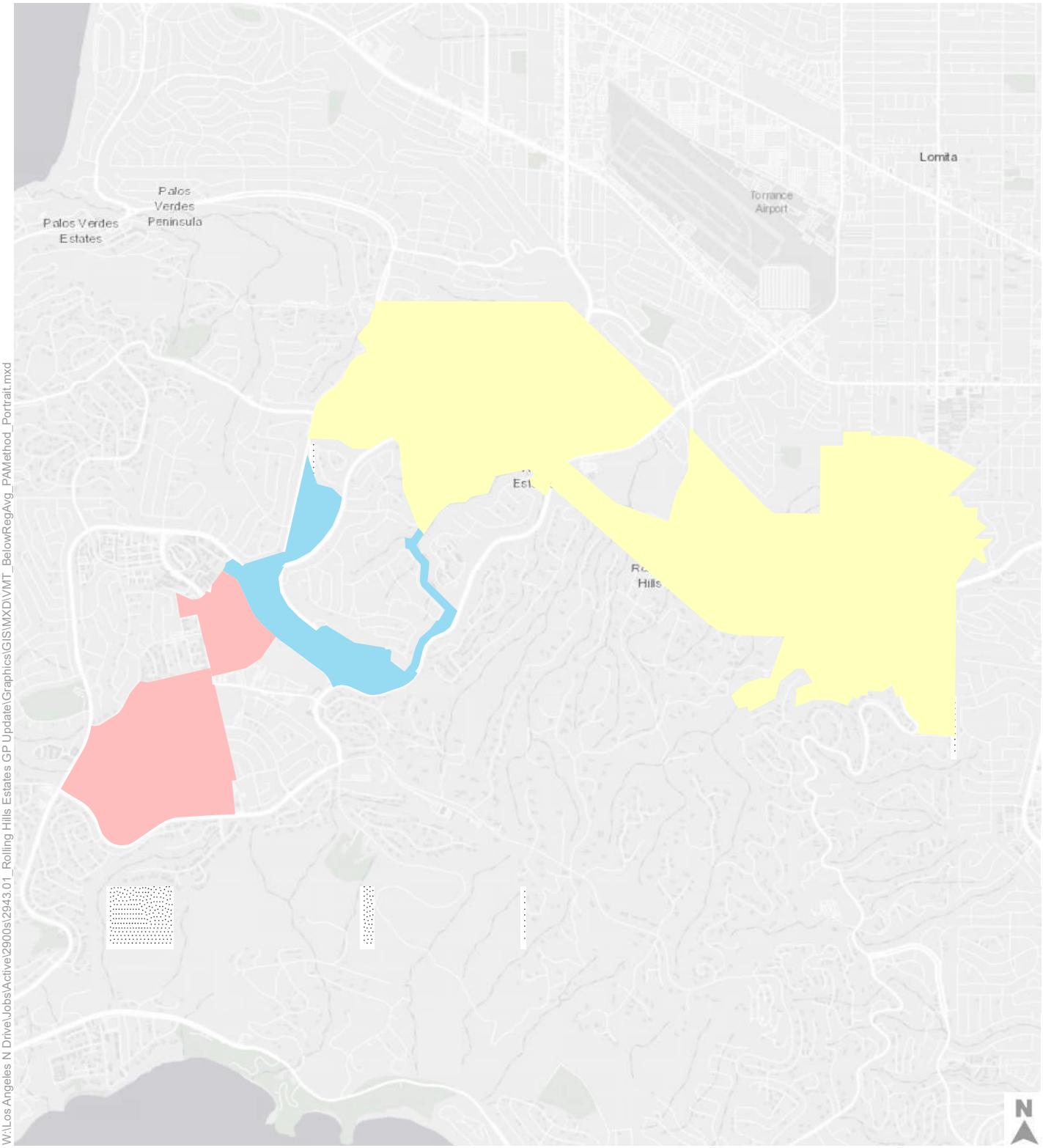
4. Vehicle Miles Traveled (VMT) Analysis

This chapter summarizes the methodology and analysis of the City's TA criteria using vehicle miles traveled (VMT) as the new CEQA metric for determining a Project's potential for significant impact. The State Office of Planning and Research (OPR) finalized the revisions to the CEQA Guidelines in accordance with Senate Bill (SB) 743, which replaces automobile delay and Level of Service (LOS) with Vehicle Miles Traveled (VMT) as the new metric of analysis. The screening criteria, VMT analysis, thresholds and mitigation presented below are in accordance with the Office of Planning and Research Technical Advisory[2]. A program-level assessment of the 2040 General Plan buildout scenarios was performed, including cumulative, using the Southern California Association of Governments (SCAG) adopted 2016 RTP/SCS Travel Demand Model.

4.1 Screening Thresholds

CEQA Guidelines Section 15064.7 allows lead agencies the discretion to select their own screening criteria. OPR provides guidance on types of land use and transportation projects that can be screened from VMT analysis. The guidance suggests that project size and location can be used to evaluate and determine up front whether a project can be screened from VMT analysis under the new SB 743, or CEQA, transportation assessment requirements. **Table 9** provides the 2021 baseline VMT metrics for the City of Rolling Hills Estates. **Figure 9** shows how different parts of the City perform in the base year for residential VMT per capita compared to the citywide average. **Figure 10** shows how different parts of the City perform in the base year for work VMT per employee compared to the citywide average.

[2] "Technical Advisory: On Evaluating Transportation Impacts in CEQA." California Governor's Office of Planning and Research (OPR). December, 2018.



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SCAG Model 2016 RTP

Figure 9

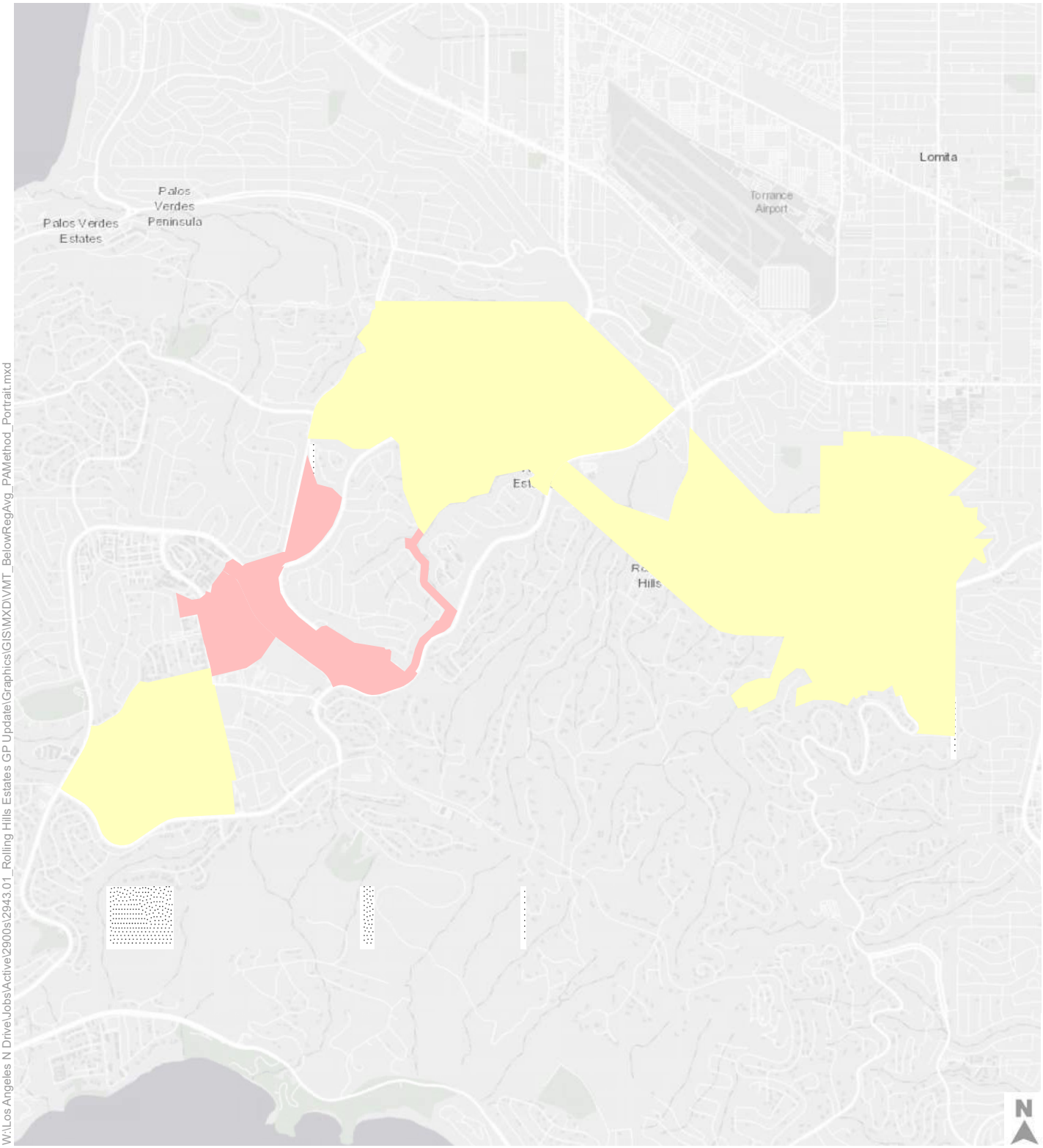
Low VMT Area Screening - Residential

Daily Residential Home Based VMT per Capita
Comparison to Citywide Average
2021 Baseline

< -15% below Citywide Average

0 to -15% below Citywide Average

Higher than Citywide Average



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SCAG Model 2016 RTP

Figure 10

Low VMT Area Screening - Office

0 to -15% below Citywide Average

Higher than Citywide Average

Daily Home Based Work VMT per Employee
Comparison to Citywide Average
2021 Baseline

4.2 Project VMT Impact Analysis

This section includes an evaluation of the General Plan Buildout scenarios ("Project") generated VMT, applying the same methodology outlined in the City's Draft 2021 Transportation Assessment Guidelines (TAG). The Project VMT impact analysis includes: (1) Determining the appropriate metric(s) and corresponding threshold(s) of significance, (2) Calculating the Project VMT, (3) Determining the impact significance, and, if applicable, (4) Recommend appropriate mitigation measures. For the purposes of SB 743, VMT to be analyzed is generated by on-road passenger vehicles, specifically cars and light-duty trucks.

4.2.1 Determine the Metric and Threshold of Significance

Based on the proposed residential and commercial land uses of the General Plan Buildout project scenarios, the metrics of analysis include the following:

- **Residential Uses** – VMT per capita calculated as the total home-based productions VMT divided by the population of the General Plan Buildout scenarios.
- **Employment Uses** – VMT per employee calculated at the total home-based work productions VMT divided by the number of employees of the General Plan Buildout scenarios.
- **Total VMT per Service Population** – Total origin/destination VMT divided by the sum of residents and employees of the General Plan Buildout scenarios.

Table 10 below shows the corresponding thresholds of significance for each of the VMT metrics. As calculated from the 2016 SCAG RTP/SCS travel demand model, the average daily home-based VMT per capita in Rolling Hills Estates is 17.8, and the average daily home-based work VMT per employee is 20.1. For the purpose of analyzing the General Plan, the VMT threshold of significance for residential uses is *15 percent below the baseline citywide average residential VMT per capita*; or 15.1 residential VMT per capita. For commercial uses it is *15 percent below the baseline citywide average work VMT per employee*; or 17.1 for work VMT per employee.

TABLE 10: CITY OF ROLLING HILLS ESTATES VMT THRESHOLDS OF SIGNIFICANCE

Project Type	Metric Description	VMT Threshold
Residential	15 percent below the existing citywide average VMT per capita	15.1
Work	15 percent below the existing citywide average VMT per employee	17.1
Retail	No net change in total VMT	Δ VMT = 0

Mixed-Use	The project VMT impact should be considered significant if any (one or all) of the project land uses exceed the impact criteria for that particular land use, taking credit for internal capture. In such cases, mitigation options that reduce the VMT generated by any or all of the land uses could be considered	15.1 for residential use; 17.1 for office use.
Land Use Plans	15 percent below the existing citywide average total VMT per service population	38.5

Source: City of Rolling Hills Estates, Draft Transportation Assessment Guidelines, 2021.

4.2.2 Calculate Project Scenarios VMT

For this study, the SCAG 2016 RTP/SCS travel demand model was utilized to estimate the VMT metrics for the 2040 Project Scenarios.

Project Scenarios VMT Analysis

The first step for calculating the Project Scenarios VMT was to update the appropriate traffic analysis zones (TAZs) within the SCAG 2016 travel demand model to reflect the Project land uses for each scenario. The General Plan includes two buildout scenarios for year 2040: (1) Low-Buildout and (2) High-Buildout. The population and employee totals were estimated based on the proposed land uses for each scenario (i.e., the number of households and square footage of commercial/non-residential) and converted using standard conversion factors. The majority of the households added in each of the General Plan buildout scenarios will comprise of multifamily housing and accessory dwelling units (ADUs).

Table 11: Rolling Hills Estates 2040 General Plan Project Scenarios – VMT Metrics

SCAG 2016 RTP/SCS Travel Demand Model		
2040 Low-Buildout Scenario	**2040 Project Scenario Daily VMT**	**Comparison to 2021 City Baseline**
Residential VMT per Capita	16.8	***-5.6%***
Work VMT per Employee	17.3	***-13.9%***
Total VMT per Service Population	36.5	*-19.4%*
2040 High-Buildout Scenario		
Residential VMT per Capita	16.4	***-7.9%***
Work VMT per Employee	17.0	*-15.4%*
Total VMT per Service Population	33.8	*-25.4%*

Source: Fehr & Peers, 2021.
Percentages shown in **bold** indicate a VMT impact per the City's guidelines.

Figure 11 – 2040 General Plan Low-Build Scenario VMT Metrics Compared to the 2021 Base Year Citywide Average

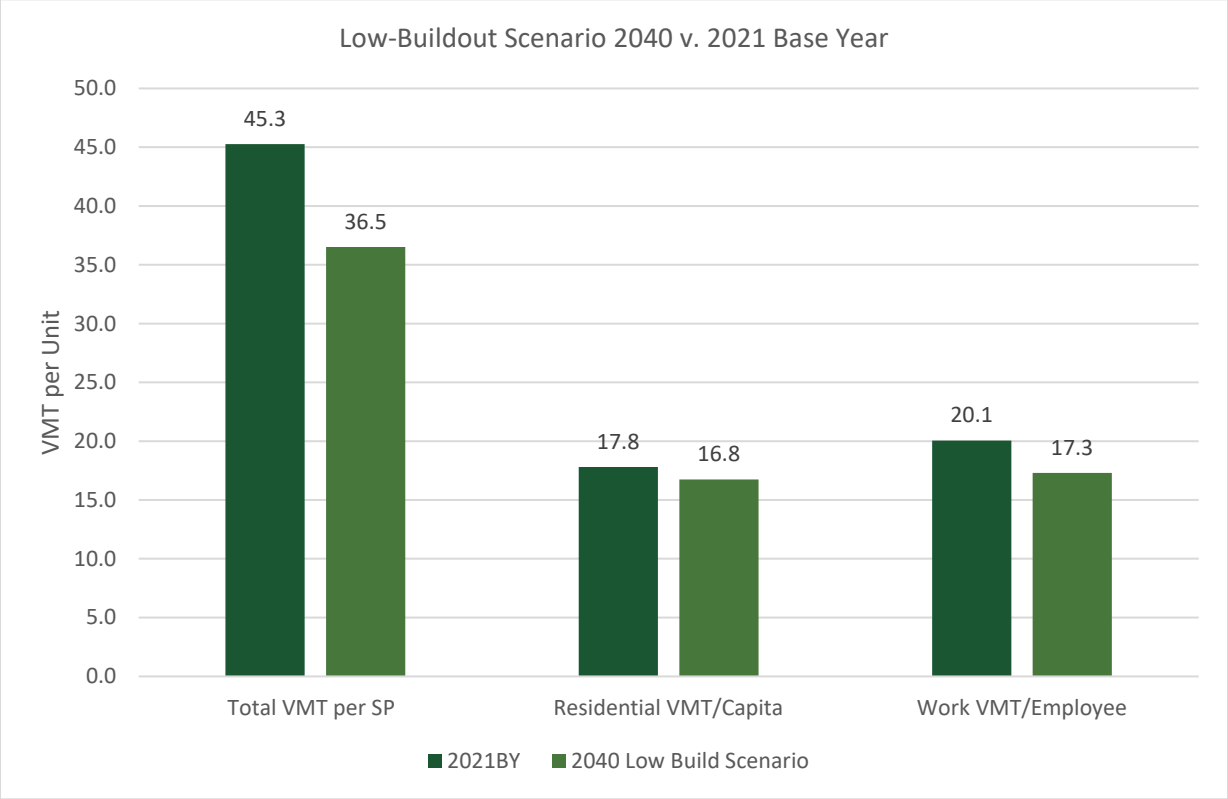


Figure 12 – 2040 General Plan High-Build Scenario VMT Metrics Compared to the 2021 Base Year Citywide Average

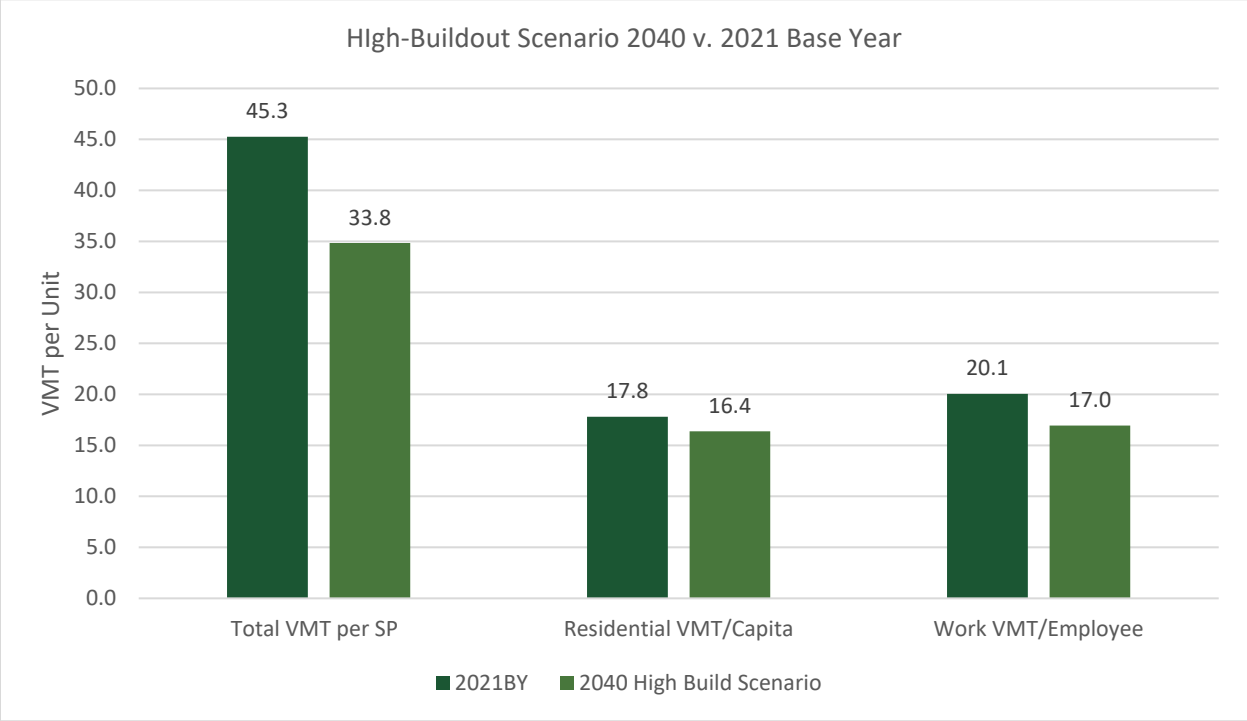


Table 11 provides a summary of the VMT metrics for the 2040 General Plan Project Buildout Scenarios. The VMT metrics include the residential VMT per capita, work VMT per employee, and total VMT per service population (where service population equals the sum of residents and employees in Rolling Hills Estates). Table 11 also includes a comparison of the 2040 VMT metrics to the 2021 Citywide baseline shown in Table 9.

To convert the Project Scenarios total daily VMT per service population to total annual VMT, an annualization factor was estimated using Caltrans PeMS data from year 2019 (given the pandemic in 2020). Using an annualization factor of 365 would not be appropriate since weekday VMT is typically different than weekend VMT. Based on I-110 freeway ramp data in the vicinity of the City, an annualization factor of 350 was estimated for the Project Scenarios -after considering the relative distribution of ramp volumes on weekdays versus weekends in 2019. The total annual VMT for the Low-Buildout Project Scenario is projected to be 201,545,750, and 221,051,250 for the High-Buildout Project Scenario.

4.2.3 Project VMT Impact Determination

General Plan 2040 Low-Buildout Project Scenario

As shown in **Figure 11**, the 2040 General Plan Low-Buildout Scenario is projected to have a significant VMT impact for the residential VMT per capita and the work VMT per employee metric. The Project is projected to have a daily residential VMT per capita of 16.8, which is 5.6% below the 2021 base year citywide average (17.8 residential VMT per capita). This does not meet the City's significance threshold of being 15% or better than the base year. Additionally, the Project is projected to have a daily work VMT per employee of 17.3, which is 13.9% below the 2021 base year citywide average (20.1 work VMT per employee). However, the low-buildout scenario is 15% or better for the total VMT per service population. While the low-build scenario results in a net decrease in non-residential square footage (15%) compared to the 2021 baseline, and hence fewer number of employees in the City, the City does not perform well for commuting trips given the existing imbalanced flow of workers, relatively long average commute trip lengths, and a lack of comparable/alternative modes of travel and infrastructure -including walking, biking, and/or taking transit. Possible strategies to mitigate the residential VMT per capita and work VMT per employee impact, in line with the City's General Plan goals, are discussed in the subsequent section.

General Plan 2040 High-Buildout Project Scenario

As shown in **Figure 12**, the 2040 General Plan High-Buildout Project Scenario is projected to have a significant VMT impact for the residential VMT per capita metric. The Project is projected to have a daily residential VMT per capita of 16.4, which is 7.9% below the 2021 base year citywide average (17.8 residential VMT per capita). This does not meet the City's significance threshold of being 15% or better than the base year. However, for the other VMT metrics, the High-Buildout Scenario is 15% or better for work VMT per employee and the total VMT per service population. The High-Buildout Scenario results in a significantly larger net increase in total number of households when compared to the Low-Buildout Scenario, and given a proportion of the multifamily housing and accessory dwelling units (ADUs) will be built in low-VMT efficient areas (i.e., outside of the commercial district TAZ), this results in a significant VMT impact for the residential VMT per capita metric. Additionally, with the majority of the High-Buildout Scenario housing allocated to the commercial district, the work VMT per employee is no longer an impact given the model's improved housing-jobs balance, along with overall growing trends towards more telecommuting.

Given the above findings of significant Project VMT impact for both General Plan buildout project scenarios, the identification of VMT mitigation measures are required and analyzed in the subsequent section.

4.3 General Plan Buildout Scenarios VMT Mitigation

The types of mitigation that affect VMT are those that reduce the number of single-occupant vehicles generated by the project. This can be accomplished by changing the land uses being proposed or by implementing TDM strategies. TDM strategies have been determined to be among the most effective

VMT impact mitigators. TDM strategies are reductions available from certain types of project site modifications, programming, and operational changes.

The effectiveness of identified TDM strategies is based primarily on research documented in the 2010 California Air Pollution Control Officers Association (CAPCOA) publication, *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA, 2010). CAPCOA offers methodology based on preferred literature, along with methodology based on alternative literature, for each strategy. The strategies described in the table in **Appendix C** are a sample of the options most effective in areas like the City of Rolling Hills Estates. For a comprehensive list of available TDM strategies, please refer to *Quantifying Greenhouse Gas Mitigation Measures*. Appendix C to this document provides a comparison of the VMT reductions that can be expected from the strategies in the CAPCOA guidance with anticipated reductions as described in literature that has been published after 2010.

The CAPCOA document contains detailed equations to apply these TDM reductions given the land use type and built environment context. The percent reduction shown in Appendix C should not be directly applied to a project. In addition, some TDM strategies have complementary benefits reducing VMT, and need to be considered in combination, and not individually.

Specific mitigation strategies need to be tailored to the project characteristics and their effectiveness needs to be analyzed and documented as part of the environmental review process to determine if impacts could be mitigated or if they would remain significant and unavoidable. Given that research on the effectiveness of TDM strategies is continuing to evolve, feasible mitigation measures should be considered based on the best data available at the time a project is being considered by the City and documented accordingly in the Transportation Assessment Guidelines. TDM strategies and their relationship to VMT reduction is found in Appendix C.

4.3.1 Low-Buildout and High-Buildout Project Scenarios TDM Mitigation Strategies

Potentially feasible TDM strategies that could mitigate the identified significant VMT impacts include:

- Provide Pedestrian Network Improvements
- Construct or Improve Bike Facility or Expand Bikeway Network
- Expand Car Share
- Provide Ridesharing Program
- Expand
- Implement Commute Trip Reduction Program

Descriptions of the TDM strategies listed above are provided in Appendix C. The City will work with future developers to ensure they provide pedestrian network improvements, as well as bike facility improvements, as TDM measures for mitigating VMT. However, the combination of these strategies would yield approximately a 1-2% VMT reduction for the Buildout Scenarios. The City will coordinate with neighboring cities and LA Metro to seek additional transit opportunities and resources in the Planning

Area and on the Palos Verdes Peninsula. Should a major transit station or similar facility be sought on the Peninsula, the Peninsula Center Commercial District shall be a target location for such a facility to align the City's highest density development with transit opportunities. The remaining TDM measures are primarily targeted at reducing the work VMT per employee metric (or home-based work attraction trips), whereas the VMT impact for both Buildout Scenarios is for the residential VMT per capita efficiency metric. With respect to parking management, the City is updating their parking code requirements for new development as part of the General Plan, to reduce the required number of spaces.

After considering all viable TDM strategies to fully mitigate the Project VMT impact of the General Plan Project Buildout Scenario, the Project results in a significant and unavoidable VMT impact. Furthermore, requiring a substantial level of TDM measures for future projects would create a financial impediment for developers to build the number housing units outlined in the Buildout Scenarios, including the City's required Regional Housing Needs Assessment (RHNA) numbers. Lastly, the location of the proposed housing and commercial uses would be mainly concentrated in the commercial district, which is the most efficient location in the City with respect to VMT.

4.4 Other CEQA Significance Criteria

In addition to the VMT analysis described above, pursuant to CEQA Guidelines Section 15064.3, subdivision (b), the Project may have a significant impact on transportation if it would:

- Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, and bicycle and pedestrian facilities;
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access

4.4.1 Conflict with a Plan, Ordinance, or Policy

The purpose of this section is to determine whether the Project conflicts with a transportation-related City plan, ordinance, or policy that was adopted to protect the environment. A project would not be shown to result in an impact merely based on whether a project would not implement an adopted plan, ordinance or policy. Rather, it is the intention of this threshold test to ensure that proposed development does not conflict with nor preclude the City from implementing adopted plans, ordinances or policies. Furthermore, under CEQA, a project is considered consistent with an applicable plan if it is consistent with the overall intent of the plan and would not preclude the attainment of its primary goals. A project does not need to be in perfect conformity with each and every policy. Finally, any inconsistency with an applicable plan, ordinance or policy is only a significant impact under CEQA if the plan, ordinance, or policy was adopted for the purpose of avoiding or mitigating an environmental effect and if the inconsistency itself would result in a direct physical impact on the environment.

This evaluation was conducted by reviewing City documents such as the Rolling Hills Estates Mobility Element, the Housing Element, Local Road Safety Plan, and municipal code sections.

- **Mobility Element** is the City's document to guide the operations and design of streets and other public rights of way. It lays out a vision for improving the way people, goods, and resources move from place to place. The Mobility Element addresses all modes of travel, and in addition to improving mobility and accessibility to opportunities, the plan is about enhancing the quality of life for today's generation, as well as generations to come. The Project's proposed land use and operations design features were reviewed and compared to existing and future conditions resulting from the Project, including high injury corridor identification, and pedestrian, bicycle, and transit accessibility. The Project is consistent with the reviewed goals and policies of the Mobility Element.
- **Housing Element**[4] provides the City with a roadmap for accommodating the projected number of housing units, identified under the Regional Housing Needs Assessment (RHNA), needed to house existing and future City residents. The Housing Element also helps guide future decisions that impact housing. The plan aims to achieve a number of overarching goals, including increasing housing production, improving access to affordable housing, and promote fair housing choice for all. In the current housing and economic climate, a major focus of the 2021 Housing Element Update is on removing barriers to housing production to counter well-documented housing shortages, as well as addressing homelessness and ensuring the availability and fair distribution of affordable housing throughout the City to reverse existing patterns of segregation and concentrated poverty. The Project is consistent with the reviewed goals and policies of the Housing Element.
- **Local Road Safety Draft Plan** is a plan that strives to eliminate traffic-related fatalities and serious injuries in Rolling Hills Estates by 2026 through multiple strategies, such as modifying streets to better serve vulnerable road users. The plan, which is expected to be completed in early 2022, uses data analysis, community input, and best practice research to identify programs and policies that can make the streets safer for everyone. The Project meets the goals and objectives set forth in the Local Road Safety plan. Projects located on the High Injury Corridor (HIC) should make improvements or fund them. The Project is not located on a High Injury Corridor, as identified in the plan, and the Project will not conflict with the implementation of future City safety projects in the public right-of-way.
- **The Rolling Hills Estates Code of Ordinances** outlines requirements regarding parking supply.
    - Parking requirements in Code
        - General residential: 2 enclosed spaces per unit
        - R-A-E (conditional), R-A-20(conditional), I District, C-O: 1 per 300 sq ft
        - C-R: "sufficient to meet use", established by planning director

[4] City of Rolling Hills Estates, *2013-2021 Housing Element*, adopted January, 2014.

- C-L: 3.3 per 1000 sf GLA, with some exceptions. Can be reduced with shared parking data from applicant
- C-G: 1 per 200 sf GLA, but not less than 2 per business
    - Some more specific requirements
- SR&D: all vehicles used in conducting enterprise plus:
    - 1 per 312 sf GLA
    - 1 additional per each 10 spaces
- Mixed Used Overlay District: residential and commercial must be separate. 1 space per 1-bedroom unit, 2 for 2 and 3 bedroom. 1 guest space per 3 units
    - Senior housing: 1 per unit, 3 spaces per 4 units for guests & employees

The Project location (primarily in the Commercial District) generally supports multimodal transportation options and would be consistent with policies, plans, and programs that support alternative transportation, including the Mobility Element, the Housing Element and the Local Road Safety Plan. The Project features are intended to minimize impacts to the public right-of-way and enhance the user experience by integrating multimodal transportation options, including on-site pedestrian infrastructure and trails connecting to the Commercial District. The Project would encourage pedestrian and bicyclist activity because it concentrates the development near public transit and activity centers, which provides residences and visitors access to the Project that can be conveniently accessed by walking, biking, or taking transit. The Project would also accommodate pedestrian activity with its access locations and open space, which would be designed to City standards to provide adequate sight distance and pedestrian movement controls that would meet the City's requirements to protect pedestrian safety. The Project design and features would not substantially increase hazards, conflicts, or preclude City action to fulfill or implement projects associated with these networks and will contribute to overall walkability through enhancements to the Project and streetscape.

4.4.2 Substantially Increase Hazards Due to a Geometric Design Feature or Result in Inadequate Emergency Access

This section discusses impacts regarding the potential increase of hazards due to a geometric design feature that generally relates to the design of access points to and from the Project and may include safety, operational, or capacity impacts. Given the programmatic nature of the General Plan Project Scenarios, this section evaluates the geometric design feature at the program/Citywide level.

The Project's access locations would be designed to the City standards and would provide adequate sight distance, sidewalks, crosswalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. Street trees and other potential impediments to adequate driver and pedestrian visibility would be minimal. Pedestrian entrances separated from vehicular driveways would provide access from the adjacent streets. As a result, the Project would not substantially increase hazards or conflicts due to a geometric design feature, or result in inadequate emergency access. Additionally, there are no nearby related projects with access points proposed along the same block(s) as the proposed

Project. Accordingly, no significant cumulative impacts are anticipated to which both the Project and other nearby related projects would substantially increase hazards due to a geometric design feature or incompatible use.

5. Supplemental Traffic Analysis

5.1 Project Trip Generation

This section of the Transportation Assessment (TA) applies traditional practices of assessing safety, capacity and level of service (LOS) for informational purposes only. It is important to note that with new California Environmental Quality Act (CEQA) Guidelines to include alternative criteria for significant impacts (vehicle miles traveled [VMT]), automobile delay is no longer considered a significant impact under CEQA (Id. at subd. (b)(2)). Transportation impacts related to air quality, noise, and safety must still be analyzed under CEQA where appropriate (Id. at subd. (b)(3)). With implementation of the Senate Bill (SB) 743 guidelines, the LOS analysis requirements will not affect the CEQA transportation impacts analysis previously presented and will be fully separate from CEQA.

The development of peak hour vehicular traffic estimates for the Project Scenarios involves the use of a three-step process: trip generation, trip distribution, and traffic assignment.

Project Daily Trip Generation

The proposed 2040 General Plan Project Buildout Scenarios include the development of residential and commercial land uses. The population and employee totals were estimated based on the proposed land uses for each scenario (i.e., the number of households and square footage of commercial/non-residential) and converted using standard conversion factors. The majority of the households added in each of the General Plan buildout scenarios will comprise of multifamily housing and accessory dwelling units (ADUs).

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the local roadway network. For this analysis, trip generation was estimated for typical daily, weekday AM peak and PM peak hours. Trip generation totals (i.e., origin/destination) from the SCAG model were used to estimate the number of peak hour trips associated with each Project Scenario and are presented in **Table 12**.

Table 12 below provides a summary of the Project scenario traffic data for the 2040 General Plan Update for the City of Rolling Hills Estates. The 2040 General Plan includes two buildout scenarios: (1) Low-Buildout and (2) High-Buildout. For the purposes of this transportation impact analysis study, these trips will be evaluated to assess network capacity and level of service (LOS) for informational (non-CEQA) purposes only.

Table 12: Rolling Hills Estates General Plan Project Scenarios – Trip Generation and VMT

SCAG 2016 RTP/SCS Travel Demand Model [a]		
2040 Low-Buildout Scenario	**2040 Baseline Without Project Scenarios**	**2040 Baseline Plus Project Scenarios**
Average Daily Trips	47,950	46,160
Average Daily VMT	594,600	575,850
Average Annual VMT[b]	208,118,805	201,545,750
2040 High-Buildout Scenario		
Average Daily Trips	47,950	51,270
Average Daily VMT	594,600	631,580
Average Annual VMT[b]	208,118,805	221,051,250

Source: *Fehr & Peers, 2021*.

Notes:

[a]. Source: SCAG 2016 RTP/SCS Travel Demand Model, unless otherwise noted.

[b]. Uses an annualization factor of 350, based on local PeMS data.

5.2 Project-Generated Trip Distribution and Assignment

Project Traffic Distribution and Traffic Assignment

The geographic distribution of trips generated by the proposed Project Scenarios is typically dependent on characteristics of the street system serving the Project area; the level of accessibility of routes to and from the proposed Project area; and locations of employment areas for which residents of the housing units would be drawn. Given the programmatic, citywide nature of the Project Scenarios, a constant growth factor was estimated based on the net increase in total trips for each Project Scenario, and applied across the entire network (i.e., each study intersection).

5.3 Traffic Analysis

5.3.1 Existing Baseline (2021) Conditions

Traffic Volumes and Configurations

Per the City's TAG, the most recent available traffic conditions and physical geometry are used to determine existing baseline conditions. Given the COVID-19 pandemic, and stay-at-home orders from the County, historical traffic counts were retrieved for several of the study intersections in coordination with the City. Turning movement intersection counts for the AM and PM peak periods were collected at the 12 study intersections in 2017 (pre-COVID) as follows:

1. Silver Spur Road & Montemalaga Drive
2. Hawthorne Boulevard & Palos Verdes Drive North
3. Crenshaw Boulevard & Palos Verdes Drive North
4. Rolling Hills Road & Palos Verdes Drive North
5. Dapplegray Elementary Entrance & Palos Verdes Drive North
6. Palos Verdes Drive East & Palos Verdes Drive North
7. Indian Peak Road & Hawthorne Boulevard
8. Silver Spur Road & Hawthorne Boulevard
9. Silver Spur Road & Norris Center Drive
10. Indian Peak Road & Norris Center Drive
11. Silver Spur Road & Drybank Drive
12. Silver Spur Road & Crenshaw Boulevard

A 0.4% annual growth rate factor was also applied to the 2017 counts to reflect a 2021 existing baseline condition. The Existing Baseline (2021) Conditions peak hour traffic volumes for the study intersections are shown on **Figure 13**. The traffic count sheets are provided in **Appendix A**.

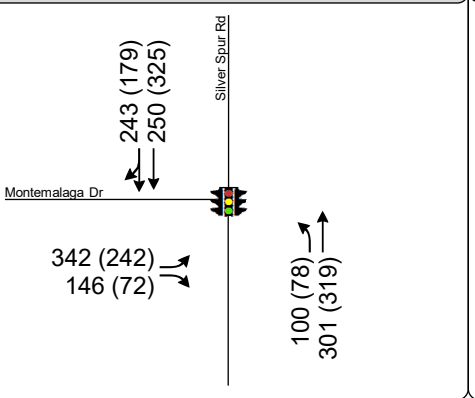
As part of the field inventory of the study area, Fehr & Peers also collected the following information:

- Lane configurations and signal phasing
- Adjacent land uses, as well existing pedestrian and bicycle facilities, including transit service

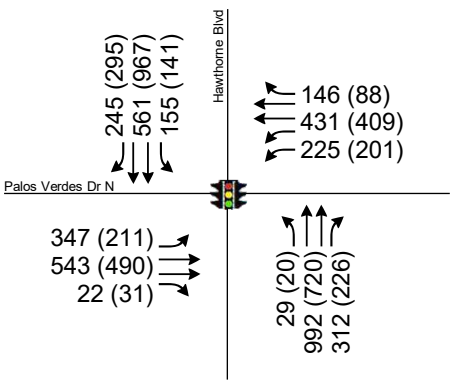
Baseline Traffic Level of Service

Traffic volumes, existing lane configurations, and signal timings were used to evaluate operations at the study intersections for Baseline AM and PM peak hour conditions using HCM 6th Edition methodology. The results are summarized in **Table 13**, showing LOS and average delay per vehicle at the study intersections. All study intersections operate at LOS D or better in the existing base year (2021) conditions, except for Hawthorne Boulevard & Palos Verdes Drive North in the AM peak, and Rolling Hills Estates Road & Palos Verdes Drive North in the AM peak. LOS calculation worksheets, including vehicle queues by lane group, are provided in **Appendix B**.

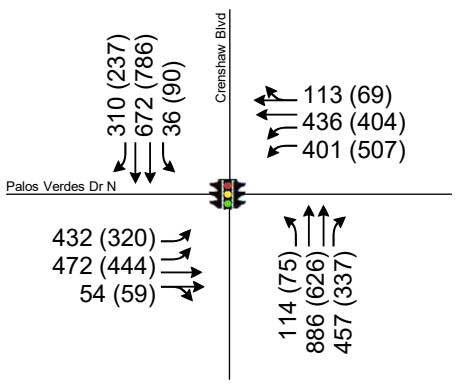
1. Silver Spur Rd/Montemalaga Dr



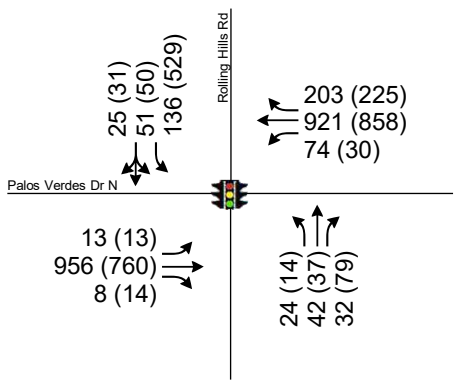
2. Hawthorne Blvd/Palos Verdes Dr N



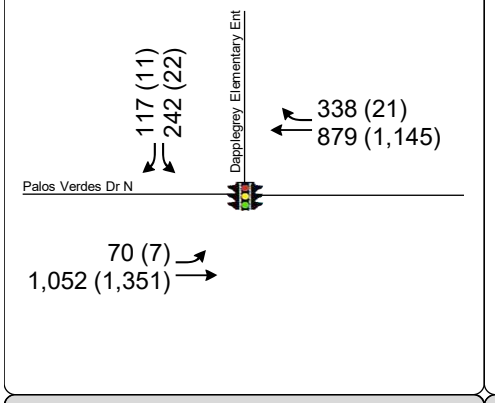
3. Crenshaw Blvd /Palos Verdes Dr N



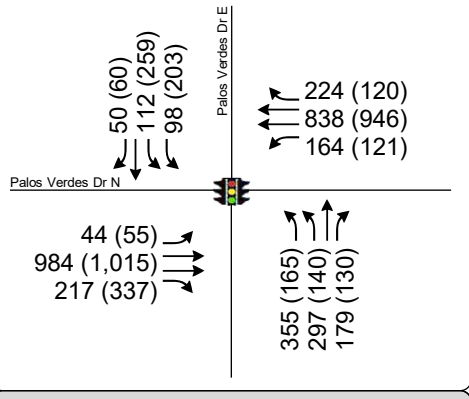
4. Rolling Hills Rd /Palos Verdes Dr N



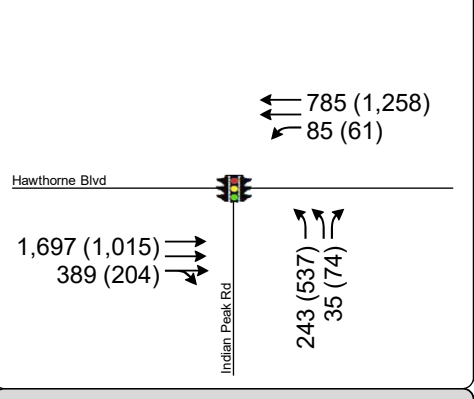
5. Dapplegrey Elementary Ent/Palos Verdes Dr N



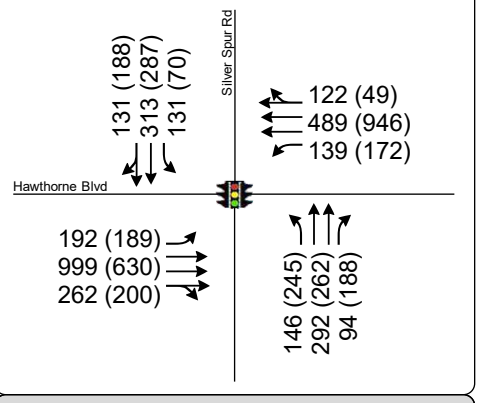
6. Palos Verdes Dr E/Palos Verdes Dr N



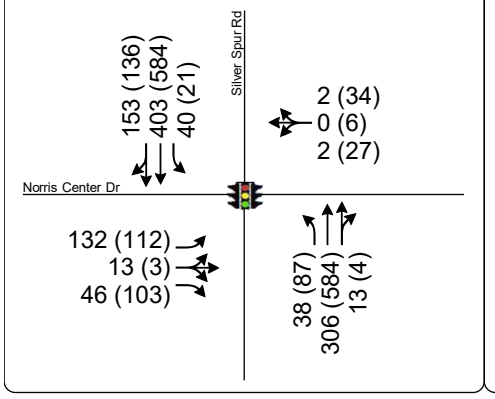
7. Indian Peak Rd/Hawthorne Blvd



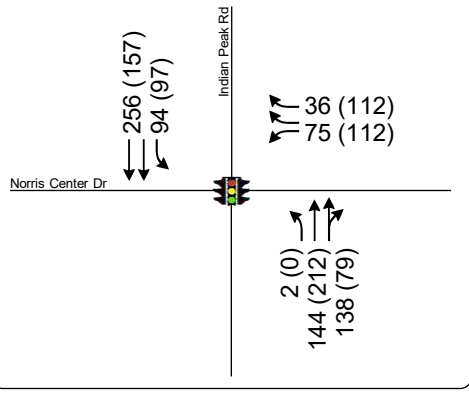
8. Silver Spur Rd/Hawthorne Blvd



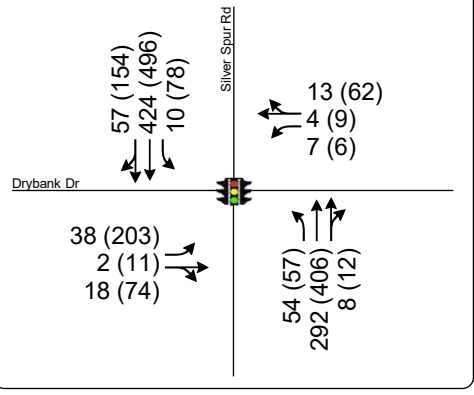
9. Silver Spur Rd/Norris Center Dr



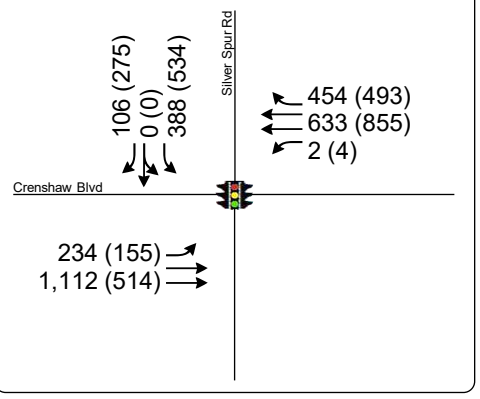
10. Indian Peak Rd/Norris Center Dr



11. Silver Spur Rd/Drybank Dr



12. Silver Spur Rd/Crenshaw Blvd



Legend

Peak Hour Volumes: AM (PM)

:Signal

Figure 13

Existing (2021) Baseline Peak Hour Traffic Volumes and Lane Configurations -Rolling Hills Estates

TABLE 13: EXISTING BASELINE (2021) CONDITIONS INTERSECTION LEVELS OF SERVICE

No.	Study Intersection	Peak Hour	Existing Baseline (2021)	
			Delay[1]	LOS
1	Silver Spur Rd. & Montemalaga Dr.	AM	12.9	B
		PM	8.8	A
2	Hawthorne Blvd. & Palos Verdes Dr. North	AM	**71.5**	**E**
		PM	28.1	C
3	Crenshaw Blvd. & Palos Verdes Dr. North	AM	46.0	D
		PM	29.9	C
4	Rolling Hills Estates Road & Palos Verdes Dr. North	AM	**65.3**	**E**
		PM	42.8	D
5	Palos Verdes Dr. North & Dapplegray Elementary Entrance	AM	16.0	B
		PM	7.1	A
6	Palos Verdes Dr. East & Palos Verdes Dr. North	AM	23.0	C
		PM	23.7	C
7	Indian Peak Rd. & Hawthorne Blvd.	AM	12.0	B
		PM	12.0	B
8	Silver Spur Rd. & Hawthorne Blvd.	AM	48.1	D
		PM	44.4	D
9	Silver Spur Rd. & Norris Center Dr./Driveway	AM	9.1	A
		PM	9.0	A
10	Indian Peak Rd. & Driveway/Norris Center Dr.	AM	15.9	B
		PM	15.7	B
11	Drybank Dr./Bart Earle Way & Silver Spur Rd.	AM	28.9	C
		PM	30.1	C
12	Crenshaw Blvd. & Silver Spur Rd./Driveway	AM	19.8	B
		PM	23.6	C

Notes: Intersection operations below LOS D are shown in **bold**.
[1]Delay (second per vehicle) and LOS estimated using HCM 6th Edition.
Source: Fehr & Peers, 2021.

According to the City of Rolling Hills Estates' General Plan Mobility Element 2040, intersections already operating at LOS E/F will be allowed to operate at existing levels.

5.3.2 Cumulative Conditions

2040 Cumulative Year Traffic Volumes

To evaluate the potential effects of the proposed Project scenarios in the cumulative year (2040) conditions, it was necessary to develop estimates of future traffic conditions in the area both without and with Project traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the Project Scenarios. These forecasts included traffic increases as a result of both

regional ambient traffic growth and traffic generated by specific developments in the vicinity of the Project (related projects).

These projected traffic volumes, identified herein as the Cumulative Year (2040) No Project conditions, represent the future baseline conditions without the proposed Project Scenarios. The traffic generated by each of the proposed Project Scenarios was then estimated based on the overall growth in origin/destination trips from the SCAG travel demand model runs. Project traffic was added to the Cumulative Year (2040) No Project conditions to form Cumulative Year (2040) Plus Project traffic conditions, which were analyzed to determine the incremental traffic effects attributable to the Project Scenarios.

The assumptions and analysis methodology used to develop each of the future year scenarios discussed above are described in more detail in the following sections.

Background or Ambient Growth

Based on the projected growth in population and employment in the City, an ambient growth factor of 0.4% per year was applied to adjust the baseline year traffic volumes to reflect the effects of regional growth and development. This adjustment was applied to the baseline year (2021) traffic volume data to reflect the effect of ambient growth by the cumulative year 2040. Note, a 0.4% growth factor was also applied to the study locations where 2017 historical counts were retrieved to adjust them to the baseline year (2021).

Related Project Traffic Generation and Assignment

Cumulative Year (2040) traffic forecasts include the effects of known specific projects, called related projects, expected to be implemented in the City prior to the cumulative year Project Buildout Scenarios. The following list of related projects was prepared based on data from the City:

- 114 single-family homes at the Rolling Hills Estates Country Club
- 114 senior living units at Merrill Gardens
- 75 condos at 927 Deep Valley Drive
- 58 other known condos built in the commercial district since 2012
- Additional 113 units from the original SCAG 2040 future year projection

Trip Distribution

The geographic distribution of the traffic generated by the related projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which employees and potential patrons of proposed commercial developments may be drawn, the locations of employment and commercial centers to which residents of residential projects may be drawn, and the location of the projects in relation to the surrounding street system. Additionally, if

the traffic study or environmental document for a related project was available, the trip distribution from that study was used.

Traffic Assignment

Using the estimated trip generation and trip distribution patterns described above, traffic generated by the related projects was assigned to the street network.

Cumulative Year (2040) No Project Traffic Volumes

Cumulative year 2040 base weekday AM and PM peak hour traffic volumes and lane geometries for the analyzed intersections are provided in **Table 14** and **Figure 14**. The Cumulative Year (2040) No Project traffic conditions represent an estimate of future conditions without the proposed Project Scenarios inclusive of the ambient background growth and related projects traffic. The cumulative analysis assumes the City will monitor the traffic signals on a regular basis and update/adjust the timing settings accordingly to account for future growth. Based on Table 14, all intersections are projected to operate at LOS D or better, except for:

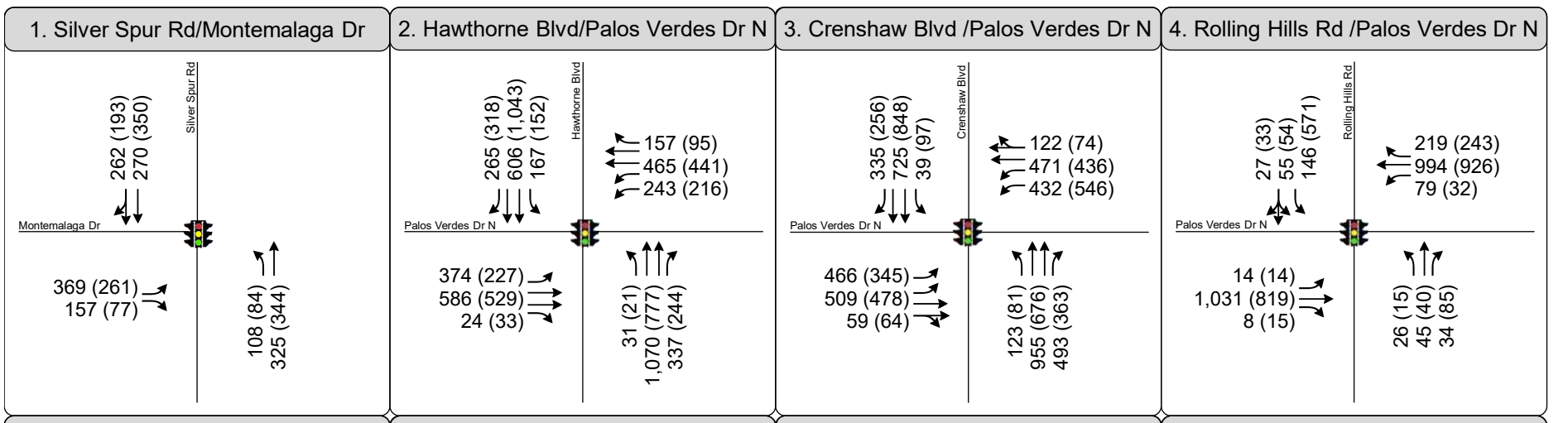
2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.

3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak only.

TABLE 14: CUMULATIVE BASELINE (2040) CONDITIONS INTERSECTION LEVELS OF SERVICE

No.	Signalized Study Intersection	Peak Hour	Cumulative Base (2040)	
			Delay[1]	LOS
1	Silver Spur Rd. Montemalaga Dr.	AM	13.2	B
		PM	8.9	A
2	Hawthorne Blvd. & Palos Verdes Dr. North	AM	**59.6**	**E**
		PM	29.9	C
3	Crenshaw Blvd. & Palos Verdes Dr. North	AM	**59.4**	**E**
		PM	34.5	C
4	Rolling Hills Estates Road & Palos Verdes Dr. North	AM	38.4	D
		PM	31.5	C
5	Palos Verdes Dr. North & Dapplegray Elementary Entrance	AM	19.8	B
		PM	13.3	B
6	Palos Verdes Dr. East & Palos Verdes Dr. North	AM	25.6	C
		PM	27.3	C
7	Indian Peak Rd. & Hawthorne Blvd.	AM	13.1	B
		PM	13.5	B
8	Silver Spur Rd. & Hawthorne Blvd.	AM	43.4	D
		PM	47.5	D
9	Silver Spur Rd. & Norris Center Dr./Driveway	AM	9.7	A
		PM	10.5	B
10	Indian Peak Rd. & Driveway/Norris Center Dr.	AM	15.8	B
		PM	15.8	B
11	Drybank Dr./Bart Earle Way & Silver Spur Rd.	AM	29.4	C
		PM	31.1	C
12	Crenshaw Blvd. & Silver Spur Rd./Driveway	AM	21.3	C
		PM	23.8	C

Notes: Intersection operations below LOS D are shown in **bold.**
[1]Delay (seconds per vehicle) and LOS estimated using HCM 6th Edition.
[2]Per the City's TAG, an LOS deficiency arises when the change in average delay increases by 4.0 seconds or more at a signalized intersection operating at LOS E under baseline conditions, or by 2.0 seconds or more at LOS F under baseline conditions.
Source: *Fehr & Peers, 2021.*



Legend

Peak Hour Volumes: AM (PM)

:Signal

Figure 14

Cumulative (2040) Base No Project Peak Hour Traffic Volumes and Lane Configurations - Rolling Hills Estates

5.3.3 Cumulative Plus Project Conditions

Cumulative Year Plus Project Traffic Projections

The proposed Project Scenarios traffic volumes were added to the Cumulative Year No Project traffic projections, resulting in Cumulative Year (2040) Plus Project AM and PM peak hour traffic volumes. As provided in **Figures 15 and 16**, the Cumulative Year (2040) Plus Project scenarios presents future traffic conditions with the completion of the proposed Project Scenarios.

Cumulative Year Plus Project Traffic Analysis Criteria

Table 15 represents the intersection level of service thresholds, as defined in the *Highway Capacity Manual, 6th Edition*, for both signalized and unsignalized intersections.

TABLE 15: INTERSECTION LEVEL OF SERVICE THRESHOLDS

Level of Service (LOS)	Signalized Intersection Average Control Delay (sec/veh)	Unsignalized Intersection Average Control Delay (sec/veh)
A	≤ 10.0	≤ 10.0
B	> 10.1 to 20.0	> 10.1 to 15.0
C	> 20.1 to 35.0	> 15.1 to 25.0
D	> 35.1 to 55.0	> 25.1 to 35.0
E	> 55.1 to 80.0	> 35.1 to 50.0
F	≥ 80.0	> 50.0

Source: *Highway Capacity Manual, 6th Edition.* Transportation Research Board, 2016.

Performance Criteria and LOS Acceptable Thresholds

Per the City's TAG for project traffic analysis, the City has identified LOS D as the threshold for acceptable operating conditions for intersections. The following criteria was used to determine if the addition of Project traffic would be responsible for LOS deficiencies and whether feasible roadway modifications should be identified to improve performance:

- A signalized intersection to degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of project trips in the opening/cumulative year. On occasion, LOS E may be allowed for peak periods per the City's discretion.
- The average delay to increase by 4.0 seconds or more at a signalized intersection operating at LOS E under baseline conditions.
- The average delay to increase by 2.0 seconds or more at a signalized intersection operating at LOS F under baseline conditions.

Cumulative Year Operational Analysis

The 2040 Cumulative Year No Project and Plus Project Scenarios peak hour traffic volumes were analyzed to determine the projected LOS for each of the analyzed intersections. **Table 16** summarizes the projected Cumulative Year (2040) No Project and Plus Low-Buildout Project Scenario LOS for the study intersections. **Table 17** summarizes the projected Cumulative Year (2040) No Project and Plus High-Buildout Project Scenario LOS for the study intersections.

Cumulative Year (2040) No Project Traffic Level of Service

Eight of the twelve study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Cumulative Year (2040) No Project Scenarios conditions. The following signalized intersections are projected to operate at LOS E in at least one of the peak hours under Cumulative Year (2040) No Project Scenarios conditions:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.

3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak only.

Cumulative Year (2040) Plus Project Scenarios Traffic Analysis

Low-Buildout Project Scenario

Ten of the twelve study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Cumulative Year (2040) Plus Low-Buildout Project Scenario conditions. The following signalized intersections are projected to operate at LOS E in at least one of the peak hours under Cumulative Year (2040) Plus Low-Buildout Project Scenario conditions:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak hour only.

3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak hour only.

The peak hour LOS/delay for several of the intersections improve under this scenario since there are fewer commercial trips (i.e., less commercial square footage).

High-Buildout Project Scenario

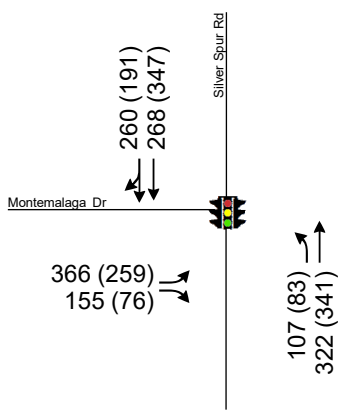
Eight of the twelve study intersections are projected to operate at LOS D or better during the morning and afternoon peak hours under Cumulative Year (2040) Plus High-Buildout Project Scenario conditions. The following signalized intersections are projected to operate at LOS E in at least one of the peak hours under Cumulative Year (2040) Plus High-Buildout Project Scenario conditions:

2. Hawthorne Blvd. & Palos Verdes Dr. North (intersection #2) with LOS E in AM peak only.

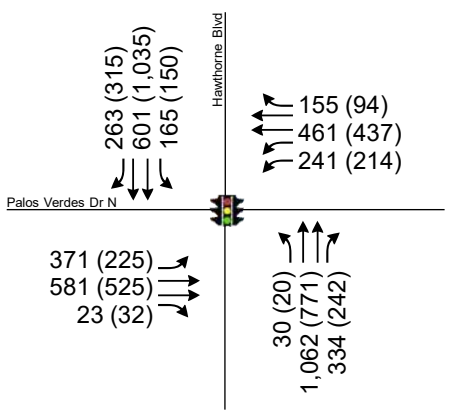
3. Crenshaw Blvd. & Palos Verdes Dr. North (intersection #3) with LOS E in the AM peak only.

Detailed intersection LOS worksheets for the study intersections is presented in **Appendix B**.

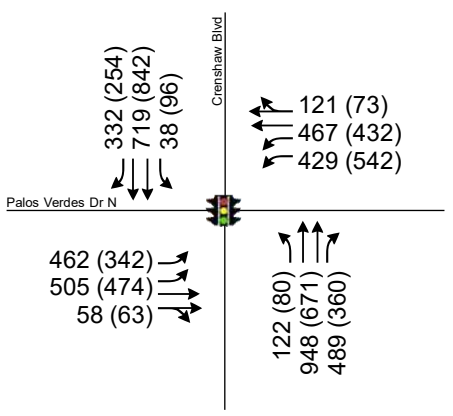
1. Silver Spur Rd/Montemalaga Dr



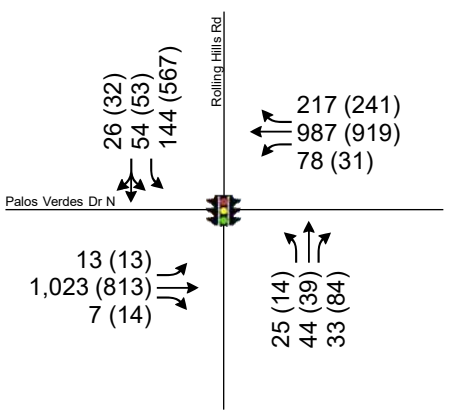
2. Hawthorne Blvd/Palos Verdes Dr N



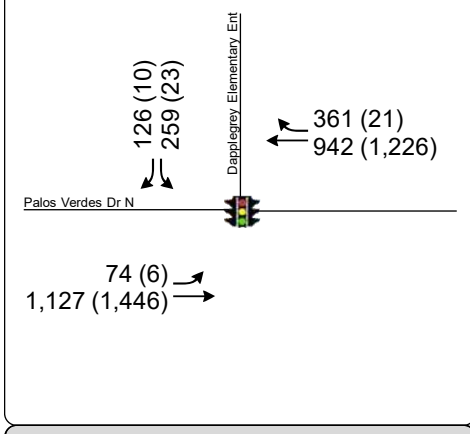
3. Crenshaw Blvd /Palos Verdes Dr N



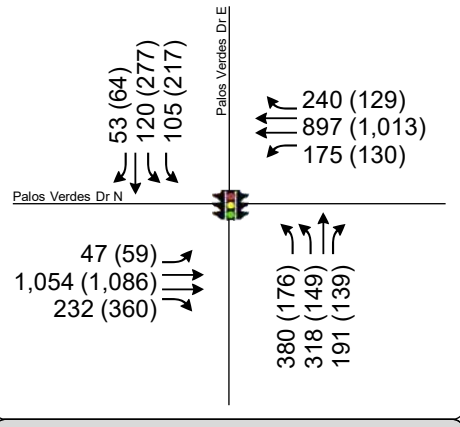
4. Rolling Hills Rd /Palos Verdes Dr N



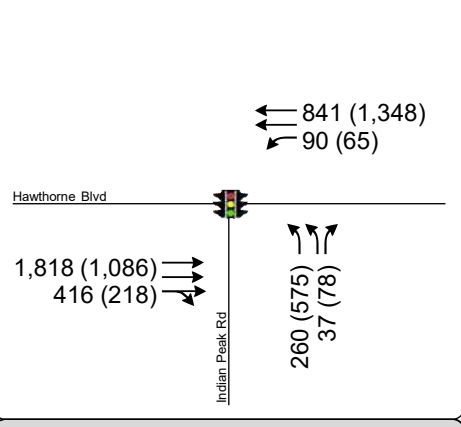
applegrey Elementary Ent/Palos Verdes



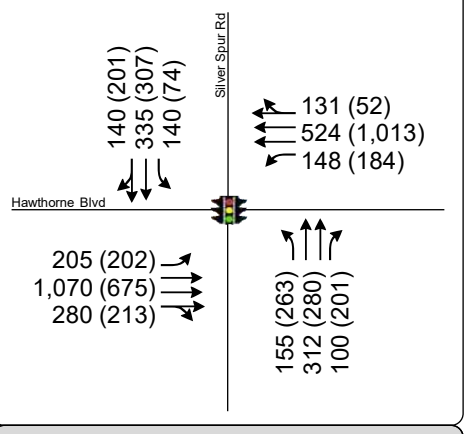
6. Palos Verdes Dr E/Palos Verdes Dr N



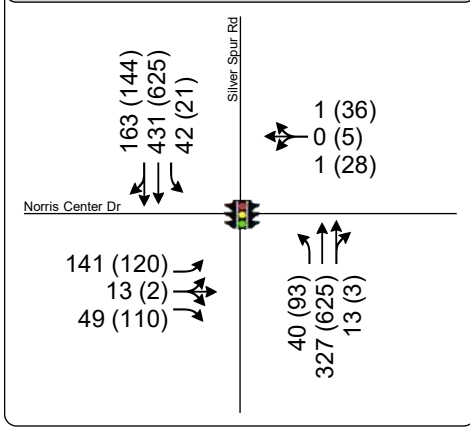
7. Indian Peak Rd/Hawthorne Blvd



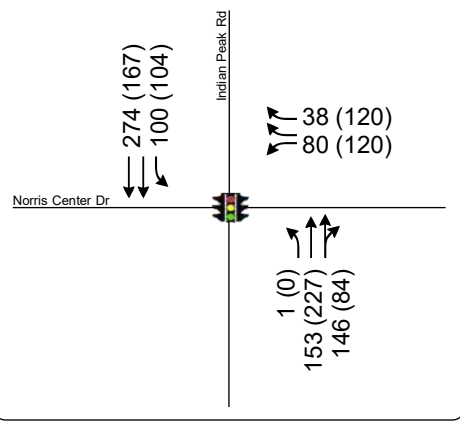
8. Silver Spur Rd/Hawthorne Blvd



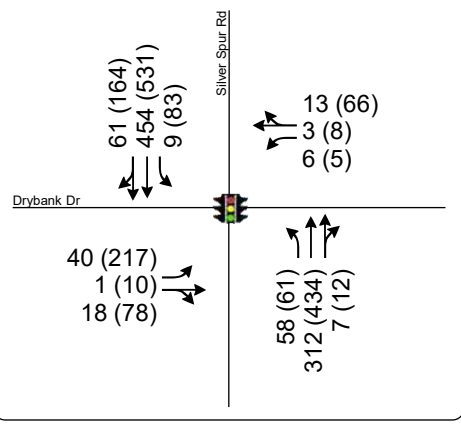
9. Silver Spur Rd/Norris Center Dr



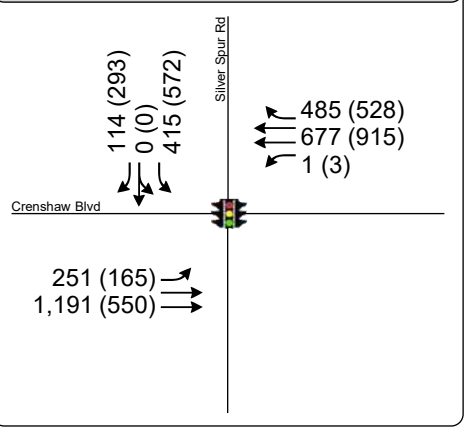
10. Indian Peak Rd/Norris Center Dr



11. Silver Spur Rd/Drybank Dr



12. Silver Spur Rd/Crenshaw Blvd



Legend

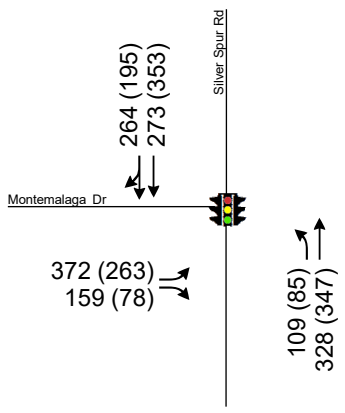
Peak Hour Volumes: AM (PM)

:Signal

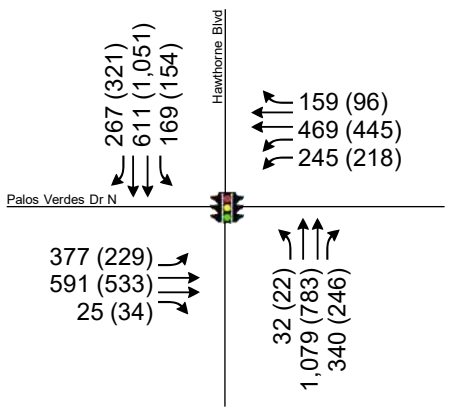
Figure 15

Cumulative (2040) Base Plus Low-Buildout Project Scenario Peak Hour Traffic Volumes and Lane Configurations - Rolling Hills Estates

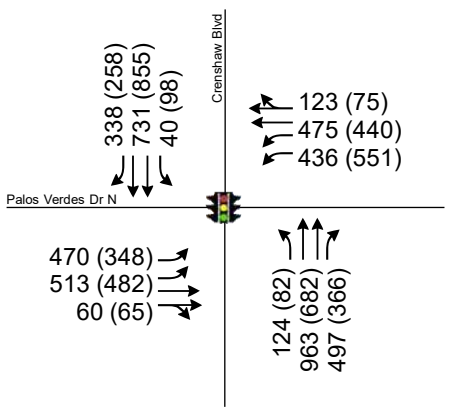
1. Silver Spur Rd/Montemalaga Dr



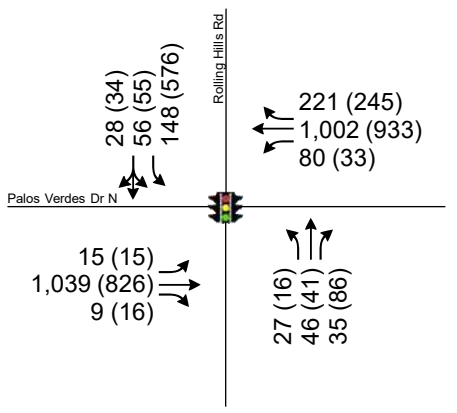
2. Hawthorne Blvd/Palos Verdes Dr N



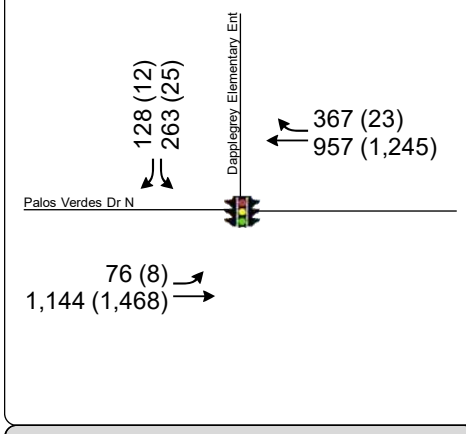
3. Crenshaw Blvd /Palos Verdes Dr N



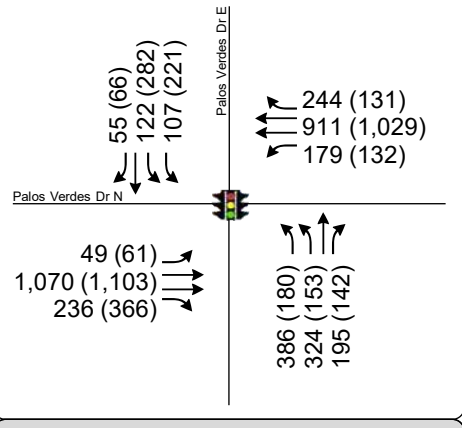
4. Rolling Hills Rd /Palos Verdes Dr N



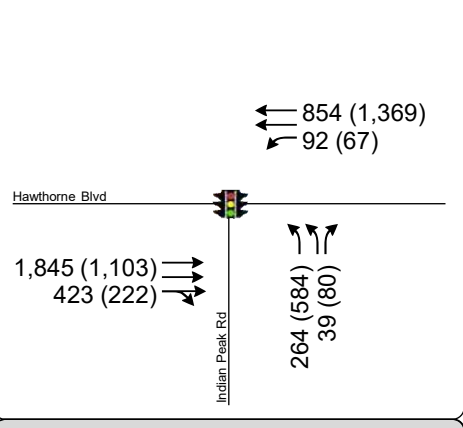
applegrey Elementary Ent/Palos Verdes



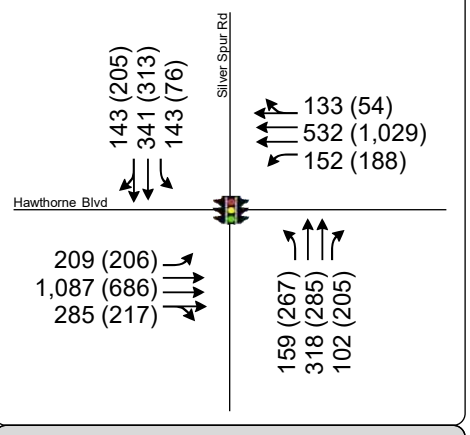
6. Palos Verdes Dr E/Palos Verdes Dr N



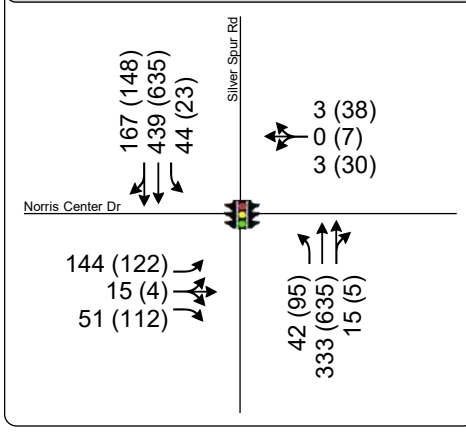
7. Indian Peak Rd/Hawthorne Blvd



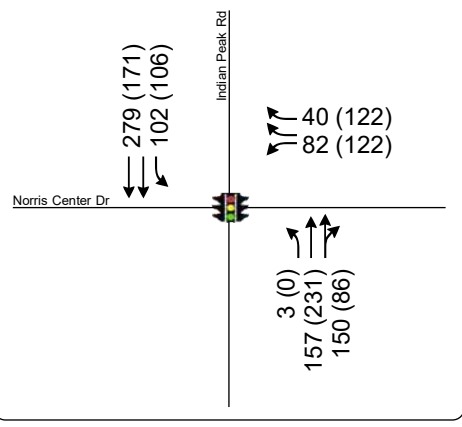
8. Silver Spur Rd/Hawthorne Blvd



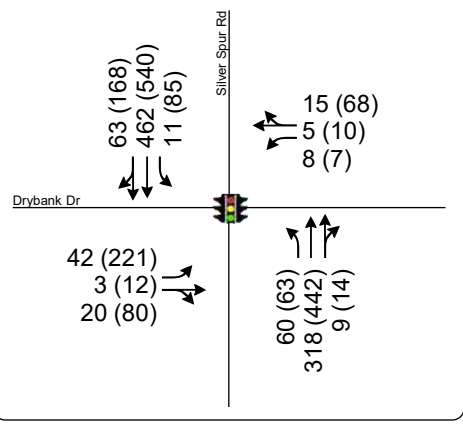
9. Silver Spur Rd/Norris Center Dr



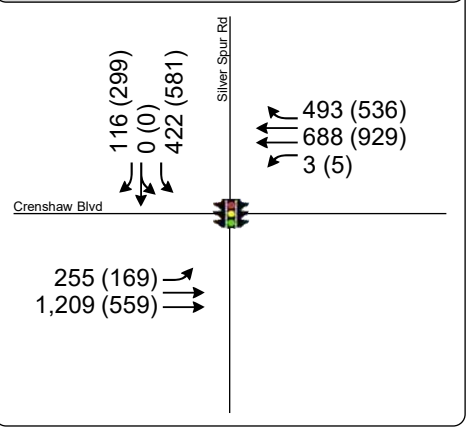
10. Indian Peak Rd/Norris Center Dr



11. Silver Spur Rd/Drybank Dr



12. Silver Spur Rd/Crenshaw Blvd



Legend

Peak Hour Volumes: AM (PM)

:Signal

Figure 16

Cumulative (2040) Base Plus High-Buildout Project Scenario Peak Hour Traffic Volumes and Lane Configurations - Rolling Hills Estates

TABLE 16: CUMULATIVE YEAR (2040) WITH AND WITHOUT LOW-BUILDOUT PROJECT SCENARIO INTERSECTIONS LEVEL OF SERVICE

No.	Study Intersection	Peak Hour	Future Base Year (2040)		Future Base (2040) Plus Project Low Buildout + Project		LOS Deficiency?
			Delay[1]	LOS	Delay[1]	LOS	(Yes/No)[2]
1	Silver Spur Rd. & Montemalaga Dr.	AM	13.2	B	13.1	B	NO
		PM	8.9	A	8.9	A	NO
2	Hawthorne Blvd. & Palos Verdes Dr. North	AM	**59.6**	**E**	**58.3**	**E**	NO
		PM	29.9	C	29.3	C	NO
3	Crenshaw Blvd. & Palos Verdes Dr. North	AM	**59.4**	**E**	**57.6**	**E**	NO
		PM	34.5	C	33.9	C	NO
4	Rolling Hills Estates Road & Palos Verdes Dr. North	AM	38.4	D	36.6	D	NO
		PM	31.5	C	30.7	C	NO
5	Palos Verdes Dr. North & Dapplegray Elementary Entrance	AM	19.8	B	19.3	B	NO
		PM	13.3	B	12.0	B	NO
6	Palos Verdes Dr. East & Palos Verdes Dr. North	AM	25.6	C	25.2	C	NO
		PM	27.3	C	26.9	C	NO
7	Indian Peak Rd. & Hawthorne Blvd.	AM	13.1	B	12.9	B	NO
		PM	13.5	B	13.4	B	NO
8	Silver Spur Rd. & Hawthorne Blvd.	AM	43.3	D	42.5	D	NO
		PM	47.5	D	46.5	D	NO
9	Silver Spur Rd. & Norris Center Dr./Driveway	AM	9.7	A	8.7	A	NO
		PM	10.5	B	10.2	B	NO
10	Indian Peak Rd. & Driveway/Norris Center Dr.	AM	15.8	B	15.8	B	NO
		PM	15.8	B	15.8	B	NO
11	Drybank Dr./Bart Earle Way & Silver Spur Rd.	AM	29.4	C	29.3	C	NO
		PM	31.1	C	31.0	C	NO
12	Crenshaw Blvd. & Silver Spur Rd./Driveway	AM	21.3	C	21.1	C	NO
		PM	23.8	C	23.7	C	NO

Notes: Intersection operations below LOS D are shown in **bold.**
[1]Delay (seconds per vehicle) and LOS estimated using HCM 6th Edition.
[2]Per the City's TAG, an LOS deficiency arises when the change in average delay increases by 4.0 seconds or more at a signalized intersection operating at LOS E, or by 2.0 seconds or more at a signalized intersection operating at LOS F under baseline conditions.
Source: *Fehr & Peers, 2021.*

Per the City's intersection performance criteria and LOS standards, the addition of project traffic would be responsible for LOS deficiencies if a signalized intersection would degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of project trips in the opening year. As shown in Table 16, none of the study intersections are projected to degrade from LOS D or better with the addition of project trips under the Low-Buildout Project Scenario. Recall that the Low-Buildout Scenario results in a net decrease in commercial square footage when compared to the cumulative 2040 baseline.

Furthermore, at locations already operating with LOS E under cumulative year baseline conditions, the average delay decreases slightly with the addition of project trips – given there is a net decrease in commercial square footage. Therefore, the addition of Project traffic under the Low-Buildout Scenario would not be responsible for LOS deficiencies with respect to average delay.

TABLE 17: CUMULATIVE YEAR (2040) WITH AND WITHOUT HIGH-BUILDOUT PROJECT SCENARIO INTERSECTIONS LEVEL OF SERVICE

No.	Study Intersection	Peak Hour	Future Base Year (2040)		Future Base (2040) Plus Project High Buildout + Project		LOS Deficiency?
			Delay[1]	LOS	Delay[1]	LOS	(Yes/No)[2]
1	Silver Spur Rd. & Montemalaga Dr.	AM	13.2	B	13.3	B	NO
		PM	8.9	A	8.9	A	NO
2	Hawthorne Blvd. & Palos Verdes Dr. North	AM	**59.6**	**E**	**60.9**	**E**	NO
		PM	29.9	C	30.6	C	NO
3	Crenshaw Blvd. & Palos Verdes Dr. North	AM	**59.4**	**E**	**61.2**	**E**	NO
		PM	34.5	C	35.1	C	NO
4	Rolling Hills Estates Road & Palos Verdes Dr. North	AM	38.4	D	40.0	D	NO
		PM	31.5	C	32.6	C	NO
5	Palos Verdes Dr. North & Dapplegray Elementary Entrance	AM	19.8	B	20.3	C	NO
		PM	13.3	B	14.6	B	NO
6	Palos Verdes Dr. East & Palos Verdes Dr. North	AM	25.6	C	26.0	C	NO
		PM	27.3	C	27.9	C	NO
7	Indian Peak Rd. & Hawthorne Blvd.	AM	13.1	B	13.4	B	NO
		PM	13.5	B	13.7	B	NO
8	Silver Spur Rd. & Hawthorne Blvd.	AM	43.3	D	44.4	D	NO
		PM	47.5	D	48.6	D	NO
9	Silver Spur Rd. & Norris Center Dr./Driveway	AM	9.7	A	10.1	B	NO
		PM	10.5	B	10.9	B	NO
10	Indian Peak Rd. & Driveway/Norris Center Dr.	AM	15.8	B	15.9	B	NO
		PM	15.8	B	15.8	B	NO
11	Drybank Dr./Bart Earle Way & Silver Spur Rd.	AM	29.4	C	29.5	C	NO
		PM	31.1	C	31.2	C	NO
12	Crenshaw Blvd. & Silver Spur Rd./Driveway	AM	21.3	C	21.4	C	NO
		PM	23.8	C	24.0	C	NO

Notes: Intersection operations below LOS D are shown in **bold.**
[1]Delay (seconds per vehicle) and LOS estimated using HCM 6th Edition.
[2]Per the City's TAG, an LOS deficiency arises when the change in average delay increases by 4.0 seconds or more at a signalized intersection operating at LOS E, or by 2.0 seconds or more at a signalized intersection operating at LOS F under baseline conditions.
Source: *Fehr & Peers, 2021.*

Per the City's intersection performance criteria and LOS standards, the addition of project traffic would be responsible for LOS deficiencies if a signalized intersection would degrade from LOS D or better under baseline conditions to LOS E or LOS F with the addition of project trips in the opening year. As shown in Table 17, none of the study intersections are projected to degrade from LOS D to LOS E with the addition of project trips under the High-Buildout Project Scenario. Intersections #2 and #3 do not result in a deficiency since these locations already operate at LOS E in the cumulative scenario, respectively, and the increase in average delay is below the City's performance criteria with the addition of Project trips.

Therefore, the addition of Project traffic under the High-Buildout Scenario would be not be responsible for LOS deficiencies with respect to average delay at any of the study intersections.

Cumulative Year Project Scenarios Effect

The 2040 Cumulative Year net Project Scenarios effect on the study intersections are as follows:

- None of the study intersections are projected to degrade from LOS D or better with the addition of Project trips under the Low-Buildout Project Scenario. Furthermore, at locations already operating with LOS E under cumulative year baseline conditions, the average delay decreases with the addition of Project trips under this scenario. Recall that the Low-Buildout Project Scenario results in a net decrease in commercial square footage compared to the cumulative 2040 baseline. Therefore, the addition of Project traffic under the Low-Buildout Scenario would not be responsible for LOS deficiencies with respect to average delay.
- None of the study intersections are projected to degrade from LOS D or better with the addition of Project trips under the High-Buildout Project Scenario. Furthermore, at locations already operating with LOS E under cumulative year baseline conditions, the increase in average delay with the addition of Project trips does not result in a LOS deficiency per the City's criteria.

Cumulative Year (2040) Plus Project Scenarios Traffic with Roadway Improvements Qualitative Analysis

None of the Project Buildout Scenarios result in a LOS deficiency per the City's criteria. Therefore, no roadway improvements were analyzed.

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APPENDIX A – INTERSECTION TURNING MOVEMENT COUNTS

National Data & Surveying Services

Intersection Turning Movement Count

Location: Silver Spur Rd & Montemalaga Dr
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-001
Date: 9/14/2017

Total

NS/EW Streets:	Silver Spur Rd				Silver Spur Rd				Montemalaga Dr				Montemalaga Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	2	0	0	1	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	22	58	0	0	0	32	36	0	47	0	17	1	0	0	0	0	213
7:15 AM	5	33	0	0	0	33	47	0	71	0	4	0	0	0	0	0	193
7:30 AM	21	68	0	0	0	67	63	0	72	0	27	0	0	0	0	0	318
7:45 AM	37	111	0	0	0	98	68	0	61	0	60	0	0	0	0	0	435
8:00 AM	24	69	0	0	0	46	66	0	52	0	26	0	0	0	0	0	283
8:15 AM	26	62	0	0	0	42	61	0	84	0	29	0	0	0	0	0	304
8:30 AM	11	54	0	0	0	60	44	0	139	0	28	0	0	0	0	0	336
8:45 AM	10	73	0	0	0	71	46	0	76	0	16	1	0	0	0	0	293
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	156	528	0	0	0	449	431	0	602	0	207	2	0	0	0	0	2375
APPROACH %'s :	22.81%	77.19%	0.00%	0.00%	0.00%	51.02%	48.98%	0.00%	74.23%	0.00%	25.52%	0.25%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	98	296	0	0	0	246	239	0	336	0	143	0	0	0	0	0	1358
PEAK HR FACTOR :	0.662	0.667	0.000	0.000	0.000	0.628	0.879	0.000	0.604	0.000	0.596	0.000	0.000	0.000	0.000	0.000	0.780
	0.666				0.730				0.717								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	2	0	0	1	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	20	95	0	0	0	81	42	0	62	0	16	1	0	0	0	0	317
4:15 PM	19	71	0	0	0	86	38	0	60	0	22	0	0	0	0	0	296
4:30 PM	16	71	0	0	0	74	49	0	63	0	17	0	0	0	0	0	290
4:45 PM	21	76	0	0	0	78	47	0	52	0	15	0	0	0	0	0	289
5:00 PM	16	66	0	0	0	86	46	0	66	0	17	1	0	0	0	0	298
5:15 PM	16	78	0	0	0	93	46	0	42	0	18	0	0	0	0	0	293
5:30 PM	19	60	0	0	0	66	58	0	37	0	14	0	0	0	0	0	254
5:45 PM	25	54	0	0	0	91	48	0	42	0	23	0	0	0	0	0	283
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	152	571	0	0	0	655	374	0	424	0	142	2	0	0	0	0	2320
APPROACH %'s :	21.02%	78.98%	0.00%	0.00%	0.00%	63.65%	36.35%	0.00%	74.65%	0.00%	25.00%	0.35%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	76	313	0	0	0	319	176	0	237	0	70	1	0	0	0	0	1192
PEAK HR FACTOR :	0.905	0.824	0.000	0.000	0.000	0.927	0.898	0.000	0.940	0.000	0.795	0.250	0.000	0.000	0.000	0.000	0.940
	0.846				0.990				0.939								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hawthorne Blvd & Palos Verdes Dr N
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-002
Date: 9/14/2017

Total

NS/EW Streets:	Hawthorne Blvd				Hawthorne Blvd				Palos Verdes Dr N				Palos Verdes Dr N				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	175	82	0	14	73	32	1	50	104	3	0	28	99	30	0	697
7:15 AM	2	181	68	0	32	99	36	0	60	117	6	0	53	103	25	0	782
7:30 AM	4	195	81	0	57	116	45	0	80	179	4	0	87	134	32	0	1014
7:45 AM	8	253	79	0	37	169	55	0	84	127	5	0	72	114	28	0	1031
8:00 AM	8	268	66	0	29	141	74	0	83	101	4	0	25	100	33	0	932
8:15 AM	8	260	81	0	29	126	67	0	94	127	8	0	37	76	50	0	963
8:30 AM	11	268	73	2	22	116	53	0	90	112	4	0	59	126	40	0	976
8:45 AM	9	265	62	0	28	180	64	2	80	104	2	0	49	97	33	0	975
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	56	1865	592	2	248	1020	426	3	621	971	36	0	410	849	271	0	7370
APPROACH %'s :	2.23%	74.16%	23.54%	0.08%	14.61%	60.11%	25.10%	0.18%	38.14%	59.64%	2.21%	0.00%	26.80%	55.49%	17.71%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	28	976	307	0	152	552	241	0	341	534	21	0	221	424	143	0	3940
PEAK HR FACTOR :	0.875	0.910	0.948	0.000	0.667	0.817	0.814	0.000	0.907	0.746	0.656	0.000	0.635	0.791	0.715	0.000	0.955
	0.939				0.905				0.852				0.779				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	4	166	54	0	30	197	56	0	53	127	7	0	53	90	30	0	867
4:15 PM	5	176	53	0	22	199	59	2	72	88	4	0	50	84	43	0	857
4:30 PM	5	196	56	0	22	223	76	0	46	138	10	0	28	88	16	0	904
4:45 PM	2	148	49	0	39	218	76	0	60	100	6	0	60	105	22	0	885
5:00 PM	7	199	74	1	39	240	69	1	46	121	8	0	50	103	30	0	988
5:15 PM	4	165	43	0	36	270	69	1	55	123	6	0	59	106	18	0	955
5:30 PM	6	161	52	0	30	230	80	1	43	83	15	0	51	96	23	0	871
5:45 PM	10	157	54	0	31	243	63	1	42	93	5	0	53	102	17	0	871
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	43	1368	435	1	249	1820	548	6	417	873	61	0	404	774	199	0	7198
APPROACH %'s :	2.33%	74.07%	23.55%	0.05%	9.49%	69.39%	20.89%	0.23%	30.87%	64.62%	4.52%	0.00%	29.34%	56.21%	14.45%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	18	708	222	1	136	951	290	2	207	482	30	0	197	402	86	0	3732
PEAK HR FACTOR :	0.643	0.889	0.750	0.250	0.872	0.881	0.954	0.500	0.863	0.873	0.750	0.000	0.821	0.948	0.717	0.000	0.944
	0.844				0.917				0.927				0.916				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Palos Verdes Dr N
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-003
Date: 9/14/2017

Total

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Palos Verdes Dr N				Palos Verdes Dr N				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	2	2	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	13	118	129	2	8	88	44	1	58	140	6	5	75	99	15	0	801
7:15 AM	10	134	102	5	5	140	44	2	70	115	9	7	131	125	12	0	911
7:30 AM	15	163	116	20	8	176	65	1	47	116	23	21	146	143	22	1	1083
7:45 AM	22	257	109	21	7	155	65	0	101	144	9	32	109	128	23	0	1182
8:00 AM	19	210	108	3	11	151	80	1	92	97	9	22	59	82	19	0	963
8:15 AM	6	241	116	6	6	179	95	1	102	107	12	8	79	76	47	0	1081
8:30 AM	8	227	134	3	21	166	55	0	96	106	14	5	113	92	26	0	1066
8:45 AM	15	221	103	3	11	172	46	1	90	107	16	7	117	87	28	0	1024
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	108	1571	917	63	77	1227	494	7	656	932	98	107	829	832	192	1	8111
APPROACH %'s :	4.06%	59.08%	34.49%	2.37%	4.27%	67.98%	27.37%	0.39%	36.59%	51.98%	5.47%	5.97%	44.71%	44.88%	10.36%	0.05%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	62	871	449	50	32	661	305	3	342	464	53	83	393	429	111	1	4309
PEAK HR FACTOR :	0.705	0.847	0.968	0.595	0.727	0.923	0.803	0.750	0.838	0.806	0.576	0.648	0.673	0.750	0.590	0.250	0.911
	0.875				0.891				0.823				0.748				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	2	2	0	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	13	173	94	6	24	152	49	0	82	84	19	16	106	97	16	1	932
4:15 PM	19	167	86	1	16	158	55	0	71	114	9	3	118	102	24	0	943
4:30 PM	7	173	89	2	15	183	45	1	77	112	18	9	107	84	22	0	944
4:45 PM	9	134	73	0	22	192	47	0	88	98	19	9	132	104	14	0	941
5:00 PM	9	118	84	3	21	178	54	2	59	139	11	6	120	123	20	0	947
5:15 PM	10	166	78	12	19	199	52	1	80	109	18	12	112	98	15	0	981
5:30 PM	12	151	96	7	20	178	60	6	68	92	11	19	118	86	23	0	947
5:45 PM	17	181	73	3	18	218	67	1	64	96	18	6	148	90	9	0	1009
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	96	1263	673	34	155	1458	429	11	589	844	123	80	961	784	143	1	7644
APPROACH %'s :	4.65%	61.13%	32.58%	1.65%	7.55%	71.02%	20.90%	0.54%	36.00%	51.59%	7.52%	4.89%	50.87%	41.50%	7.57%	0.05%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	48	616	331	25	78	773	233	10	271	436	58	43	498	397	67	0	3884
PEAK HR FACTOR :	0.706	0.851	0.862	0.521	0.929	0.886	0.869	0.417	0.847	0.784	0.806	0.566	0.841	0.807	0.728	0.000	0.962
	0.931				0.900				0.922				0.914				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rolling Hills Rd & Palos Verdes Dr N
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-004
Date: 9/14/2017

Total

NS/EW Streets:	Rolling Hills Rd				Rolling Hills Rd				Palos Verdes Dr N				Palos Verdes Dr N				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1.3	0.3	0.3	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	9	6	0	17	16	3	0	1	265	3	0	22	193	57	0	594
7:15 AM	4	7	7	1	32	13	3	0	3	222	2	0	22	263	41	0	620
7:30 AM	11	11	4	0	40	9	6	0	3	225	1	0	10	240	36	0	596
7:45 AM	5	14	14	0	44	12	12	0	5	228	1	0	18	210	65	0	628
8:00 AM	4	16	12	0	61	17	12	0	3	212	7	0	17	137	52	0	550
8:15 AM	9	15	14	0	41	17	10	1	6	214	3	0	17	153	53	0	553
8:30 AM	2	17	13	0	32	16	12	0	16	227	4	0	11	213	66	0	629
8:45 AM	10	25	11	0	42	15	23	0	11	179	4	0	27	194	62	0	603
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	47	114	81	1	309	115	81	1	48	1772	25	0	144	1603	432	0	4773
APPROACH %'s :	19.34%	46.91%	33.33%	0.41%	61.07%	22.73%	16.01%	0.20%	2.60%	96.04%	1.36%	0.00%	6.61%	73.57%	19.83%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	22	41	31	1	133	50	24	0	12	940	7	0	72	906	199	0	2438
PEAK HR FACTOR :	0.500	0.732	0.554	0.250	0.756	0.781	0.500	0.000	0.600	0.887	0.583	0.000	0.818	0.861	0.765	0.000	0.971
	0.720				0.761				0.891				0.903				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1.3	0.3	0.3	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	4	12	25	0	116	8	5	0	2	192	1	0	5	202	44	0	616
4:15 PM	5	13	28	0	108	16	5	0	2	189	4	0	12	205	31	0	618
4:30 PM	1	13	21	0	133	13	4	0	2	173	4	0	6	198	49	0	617
4:45 PM	4	5	19	1	117	14	10	0	2	213	2	0	9	234	54	0	684
5:00 PM	3	8	20	0	121	10	13	0	6	175	3	0	6	214	57	0	636
5:15 PM	4	10	17	0	149	12	3	0	2	186	4	0	8	198	61	0	654
5:30 PM	5	8	11	0	150	4	7	0	4	166	2	0	6	194	40	0	597
5:45 PM	8	9	10	1	126	23	8	0	2	189	3	0	7	236	45	0	667
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	78	151	2	1020	100	55	0	22	1483	23	0	59	1681	381	0	5089
APPROACH %'s :	12.83%	29.43%	56.98%	0.75%	86.81%	8.51%	4.68%	0.00%	1.44%	97.05%	1.51%	0.00%	2.78%	79.26%	17.96%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	12	36	77	1	520	49	30	0	12	747	13	0	29	844	221	0	2591
PEAK HR FACTOR :	0.750	0.692	0.917	0.250	0.872	0.875	0.577	0.000	0.500	0.877	0.813	0.000	0.806	0.902	0.906	0.000	0.947
	0.900				0.913				0.889				0.921				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Private Rd/Dapplegray Elementary School Entrance & Palos Verdes Dr N
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-005
Date: 9/14/2017

Total

NS/EW Streets:	Private Rd/Dapplegray Elementary School Entrance				Private Rd/Dapplegray Elementary School Entrance				Palos Verdes Dr N				Palos Verdes Dr N				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	2	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	2	0	3	0	0	283	0	0	0	277	8	0	573
7:15 AM	0	0	0	0	0	0	4	0	3	263	0	0	0	345	13	0	628
7:30 AM	0	0	0	0	8	0	4	0	8	261	0	0	0	310	15	0	606
7:45 AM	0	0	0	0	28	0	10	0	22	249	0	0	0	235	69	0	613
8:00 AM	0	0	0	0	79	0	43	0	19	275	0	0	0	172	143	0	731
8:15 AM	0	0	0	0	81	0	38	0	22	254	0	0	0	193	113	0	701
8:30 AM	0	0	0	0	50	0	24	0	5	257	0	0	0	265	7	0	608
8:45 AM	0	0	0	0	2	0	5	0	1	235	0	0	0	282	6	0	531
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	250	0	131	0	80	2077	0	0	0	2079	374	0	4991
APPROACH %'s :					65.62%	0.00%	34.38%	0.00%	3.71%	96.29%	0.00%	0.00%	0.00%	84.75%	15.25%	0.00%	
PEAK HR :	**07:45 AM - 08:45 AM**																TOTAL
PEAK HR VOL :	0	0	0	0	238	0	115	0	68	1035	0	0	0	865	332	0	2653
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.735	0.000	0.669	0.000	0.773	0.941	0.000	0.000	0.000	0.816	0.580	0.000	0.907
					0.723				0.938				0.950				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	2	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	10	0	6	0	2	327	0	0	0	228	1	0	574
4:15 PM	0	0	0	0	2	0	3	0	2	336	0	0	0	246	3	0	592
4:30 PM	0	0	0	0	5	0	3	0	1	319	0	0	0	278	6	0	612
4:45 PM	0	0	0	0	4	0	1	0	1	345	0	0	0	308	6	0	665
5:00 PM	0	0	0	0	9	0	5	0	3	316	0	0	0	259	6	0	598
5:15 PM	0	0	0	0	3	0	1	0	1	349	0	0	0	281	2	0	637
5:30 PM	0	0	0	0	4	0	1	0	2	328	0	0	0	244	4	0	583
5:45 PM	0	0	0	0	3	0	2	0	1	331	0	0	0	285	2	0	624
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	40	0	22	0	13	2651	0	0	0	2129	30	0	4885
APPROACH %'s :					64.52%	0.00%	35.48%	0.00%	0.49%	99.51%	0.00%	0.00%	0.00%	98.61%	1.39%	0.00%	
PEAK HR :	**04:30 PM - 05:30 PM**																TOTAL
PEAK HR VOL :	0	0	0	0	21	0	10	0	6	1329	0	0	0	1126	20	0	2512
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.583	0.000	0.500	0.000	0.500	0.952	0.000	0.000	0.000	0.914	0.833	0.000	0.944
					0.554				0.954				0.912				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Palos Verdes Dr E & Palos Verdes Dr N
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-006
Date: 9/14/2017

Total

NS/EW Streets:	Palos Verdes Dr E				Palos Verdes Dr E				Palos Verdes Dr N				Palos Verdes Dr N				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	2	1	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	49	48	27	0	16	14	11	0	7	228	23	0	25	218	37	0	703
7:15 AM	69	53	28	0	16	27	10	0	7	209	20	0	31	284	38	0	792
7:30 AM	85	74	48	0	31	28	11	0	6	247	31	1	40	219	72	0	893
7:45 AM	64	84	39	1	30	40	9	1	11	211	57	0	58	221	50	0	876
8:00 AM	112	61	42	0	17	24	14	0	9	248	75	0	26	186	36	0	850
8:15 AM	87	73	47	0	17	18	15	0	16	262	50	0	37	198	62	0	882
8:30 AM	39	56	30	0	23	28	8	0	16	262	44	1	40	180	43	0	770
8:45 AM	53	55	49	0	22	35	3	0	16	247	32	0	40	202	44	0	798
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	558	504	310	1	172	214	81	1	88	1914	332	2	297	1708	382	0	6564
APPROACH %'s :	40.64%	36.71%	22.58%	0.07%	36.75%	45.73%	17.31%	0.21%	3.77%	81.93%	14.21%	0.09%	12.44%	71.55%	16.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	348	292	176	1	95	110	49	1	42	968	213	1	161	824	220	0	3501
PEAK HR FACTOR :	0.777	0.869	0.917	0.250	0.766	0.688	0.817	0.250	0.656	0.924	0.710	0.250	0.694	0.932	0.764	0.000	0.980
	0.950				0.797				0.922				0.910				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	2	1	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	51	30	30	1	49	43	19	0	12	280	54	0	15	155	26	0	765
4:15 PM	34	21	28	0	47	56	12	2	8	268	60	0	27	208	26	0	797
4:30 PM	43	37	19	0	53	47	23	0	12	254	83	1	31	194	27	0	824
4:45 PM	51	29	29	0	53	50	17	0	17	262	79	0	33	284	32	0	936
5:00 PM	40	42	37	1	44	53	9	0	14	264	70	1	22	212	30	0	839
5:15 PM	32	31	36	0	45	76	13	0	14	235	92	0	35	229	24	1	863
5:30 PM	38	35	25	0	57	75	20	0	7	237	90	1	28	206	32	0	851
5:45 PM	46	29	23	1	65	58	12	0	17	247	74	1	38	238	30	0	879
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	335	254	227	3	413	458	125	2	101	2047	602	4	229	1726	227	1	6754
APPROACH %'s :	40.90%	31.01%	27.72%	0.37%	41.38%	45.89%	12.53%	0.20%	3.67%	74.33%	21.86%	0.15%	10.49%	79.07%	10.40%	0.05%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	161	137	127	1	199	254	59	0	52	998	331	2	118	931	118	1	3489
PEAK HR FACTOR :	0.789	0.815	0.858	0.250	0.873	0.836	0.738	0.000	0.765	0.945	0.899	0.500	0.843	0.820	0.922	0.250	0.932
	0.888				0.842				0.966				0.837				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Indian Peak Rd & Hawthorne Blvd
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-008
Date: 9/14/2017

Total

NS/EW Streets:	Indian Peak Rd				Indian Peak Rd				Hawthorne Blvd				Hawthorne Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	0	1	0	0	0	0	0	0	3	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	0	3	0	0	0	0	0	0	257	37	0	8	113	0	0	432
7:15 AM	29	0	2	0	0	0	0	0	0	285	54	0	9	100	0	0	479
7:30 AM	47	0	11	0	0	0	0	0	0	435	65	0	13	147	0	0	718
7:45 AM	84	0	11	0	0	0	0	0	0	429	103	0	33	230	0	0	890
8:00 AM	59	0	5	0	0	0	0	0	0	372	81	0	14	163	0	0	694
8:15 AM	56	0	9	0	0	0	0	0	0	446	99	0	15	197	0	0	822
8:30 AM	40	0	9	0	0	0	0	0	0	423	99	0	21	182	0	0	774
8:45 AM	47	0	13	0	0	0	0	0	0	325	85	0	22	156	0	0	648
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	376	0	63	0	0	0	0	0	0	2972	623	0	135	1288	0	0	5457
APPROACH %'s :	85.65%	0.00%	14.35%	0.00%					0.00%	82.67%	17.33%	0.00%	9.49%	90.51%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	239	0	34	0	0	0	0	0	0	1670	382	0	83	772	0	0	3180
PEAK HR FACTOR :	0.711	0.000	0.773	0.000	0.000	0.000	0.000	0.000	0.000	0.936	0.927	0.000	0.629	0.839	0.000	0.000	0.893
	0.718								0.941				0.813				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	0	1	0	0	0	0	0	0	3	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	127	0	13	0	0	0	0	0	0	283	51	0	8	253	0	0	735
4:15 PM	115	0	13	0	0	0	0	0	0	265	59	0	25	246	0	1	724
4:30 PM	117	0	14	0	0	0	0	0	0	274	46	0	14	244	0	0	709
4:45 PM	115	0	14	0	0	0	0	0	0	270	62	0	17	238	0	0	716
5:00 PM	129	0	15	0	0	0	0	0	0	250	46	0	13	283	0	0	736
5:15 PM	119	0	19	0	0	0	0	0	0	243	42	0	15	342	0	0	780
5:30 PM	155	0	29	0	0	0	0	0	0	244	52	0	17	309	0	0	806
5:45 PM	125	0	9	0	0	0	0	0	0	261	60	0	15	304	0	0	774
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1002	0	126	0	0	0	0	0	0	2090	418	0	124	2219	0	1	5980
APPROACH %'s :	88.83%	0.00%	11.17%	0.00%					0.00%	83.33%	16.67%	0.00%	5.29%	94.67%	0.00%	0.04%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	528	0	72	0	0	0	0	0	0	998	200	0	60	1238	0	0	3096
PEAK HR FACTOR :	0.852	0.000	0.621	0.000	0.000	0.000	0.000	0.000	0.000	0.956	0.833	0.000	0.882	0.905	0.000	0.000	0.960
	0.815								0.933				0.909				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Silver Spur Rd & Hawthorne Blvd
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-009
Date: 9/14/2017

Total

NS/EW Streets:	Silver Spur Rd				Silver Spur Rd				Hawthorne Blvd				Hawthorne Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	0	0	1	3	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	18	25	15	0	23	55	31	0	34	195	21	0	16	73	8	0	514
7:15 AM	16	47	18	0	24	35	12	0	40	186	23	2	20	85	18	1	527
7:30 AM	22	106	30	1	42	87	30	0	69	208	34	0	23	94	62	0	808
7:45 AM	24	129	23	0	53	113	38	0	52	254	39	1	48	137	48	0	959
8:00 AM	21	21	19	0	14	52	33	0	38	272	70	0	36	130	7	0	713
8:15 AM	75	31	20	0	19	56	27	0	27	249	114	1	29	120	3	0	771
8:30 AM	38	21	10	0	13	47	21	0	30	245	68	0	41	127	5	0	666
8:45 AM	32	19	23	0	25	85	24	0	37	215	59	1	62	130	4	0	716
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	246	399	158	1	213	530	216	0	327	1824	428	5	275	896	155	1	5674
APPROACH %'s :	30.60%	49.63%	19.65%	0.12%	22.21%	55.27%	22.52%	0.00%	12.65%	70.59%	16.56%	0.19%	20.72%	67.52%	11.68%	0.08%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	142	287	92	1	128	308	128	0	186	983	257	2	136	481	120	0	3251
PEAK HR FACTOR :	0.473	0.556	0.767	0.250	0.604	0.681	0.842	0.000	0.674	0.903	0.564	0.500	0.708	0.878	0.484	0.000	0.847
	0.741				0.691				0.913				0.791				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	0	0	1	3	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	53	70	37	0	26	92	60	0	62	165	46	3	44	182	21	0	861
4:15 PM	47	57	42	0	14	77	52	0	45	167	59	2	51	172	12	0	797
4:30 PM	55	54	36	2	19	72	39	0	47	161	50	3	49	188	14	0	789
4:45 PM	57	64	30	0	19	90	23	0	38	158	59	1	45	190	15	0	789
5:00 PM	58	85	70	1	27	74	59	0	46	155	48	1	42	204	13	0	883
5:15 PM	64	52	35	1	12	84	46	0	46	155	49	3	49	274	12	0	882
5:30 PM	50	58	39	0	17	57	50	0	42	157	51	2	41	210	11	0	785
5:45 PM	67	62	41	0	12	67	30	0	45	153	48	1	37	243	12	0	818
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	451	502	330	4	146	613	359	0	371	1271	410	16	358	1663	110	0	6604
APPROACH %'s :	35.04%	39.01%	25.64%	0.31%	13.06%	54.83%	32.11%	0.00%	17.94%	61.46%	19.83%	0.77%	16.80%	78.04%	5.16%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	239	257	185	2	68	282	185	0	179	620	196	7	169	931	48	0	3368
PEAK HR FACTOR :	0.892	0.756	0.661	0.500	0.630	0.839	0.784	0.000	0.973	0.987	0.961	0.583	0.862	0.849	0.923	0.000	0.954
	0.798				0.836				0.990				0.857				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Silver Spur Rd & Norris Center Dr
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-010
Date: 9/14/2017

Total

NS/EW Streets:	Silver Spur Rd				Silver Spur Rd				Norris Center Dr				Norris Center Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1.3	0.3	1.3	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	7	44	3	0	3	69	12	1	11	2	4	0	0	0	0	0	156
7:15 AM	7	56	0	1	7	59	19	2	20	2	7	0	1	0	0	0	181
7:30 AM	7	110	3	0	6	95	41	1	44	3	3	0	0	0	0	0	313
7:45 AM	5	95	5	0	13	131	45	4	50	6	14	0	1	0	0	0	369
8:00 AM	11	38	2	0	8	75	41	1	14	0	11	0	0	0	1	0	202
8:15 AM	14	58	2	0	4	95	23	2	21	3	17	0	0	0	0	0	239
8:30 AM	19	68	4	1	4	110	36	0	14	2	17	0	2	0	1	0	278
8:45 AM	29	62	1	1	5	139	44	2	11	2	22	0	1	0	0	0	319
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	99	531	20	3	50	773	261	13	185	20	95	0	5	0	2	0	2057
APPROACH %'s :	15.16%	81.32%	3.06%	0.46%	4.56%	70.46%	23.79%	1.19%	61.67%	6.67%	31.67%	0.00%	71.43%	0.00%	28.57%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	37	301	12	0	31	396	150	8	129	12	45	0	1	0	1	0	1123
PEAK HR FACTOR :	0.661	0.684	0.600	0.000	0.596	0.756	0.833	0.500	0.645	0.500	0.662	0.000	0.250	0.000	0.250	0.000	0.761
	0.729				0.758				0.664				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1.3	0.3	1.3	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	23	125	2	3	2	127	36	3	32	1	18	0	1	0	3	0	376
4:15 PM	21	131	1	1	1	148	34	1	28	0	35	0	2	1	4	0	408
4:30 PM	16	134	1	2	6	140	23	1	30	0	23	0	2	1	5	0	384
4:45 PM	16	131	1	2	2	154	34	4	22	1	27	0	7	1	4	0	406
5:00 PM	24	169	1	1	1	131	31	3	40	0	25	0	13	3	16	0	458
5:15 PM	22	140	0	2	0	149	45	3	18	1	26	0	4	0	8	0	418
5:30 PM	23	137	1	1	0	122	28	1	23	0	21	0	3	0	5	0	365
5:45 PM	18	149	2	4	4	112	41	3	35	0	11	0	1	1	5	0	386
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	163	1116	9	16	16	1083	272	19	228	3	186	0	33	7	50	0	3201
APPROACH %'s :	12.50%	85.58%	0.69%	1.23%	1.15%	77.91%	19.57%	1.37%	54.68%	0.72%	44.60%	0.00%	36.67%	7.78%	55.56%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	78	574	3	7	9	574	133	11	110	2	101	0	26	5	33	0	1666
PEAK HR FACTOR :	0.813	0.849	0.750	0.875	0.375	0.932	0.739	0.688	0.688	0.500	0.935	0.000	0.500	0.417	0.516	0.000	0.909
	0.849				0.923				0.819				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Indian Peak Rd & Norris Center Dr
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-011
Date: 9/14/2017

Total

NS/EW Streets:	Indian Peak Rd				Indian Peak Rd				Norris Center Dr				Norris Center Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	0	0	0	1	0	0	1	0	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	7	7	0	10	29	0	0	1	1	0	0	11	0	7	0	75
7:15 AM	0	15	12	0	14	50	1	0	0	1	0	0	13	0	0	0	106
7:30 AM	0	34	45	0	11	56	0	0	0	0	2	0	32	0	7	0	187
7:45 AM	0	47	60	0	30	72	0	0	1	0	0	0	22	0	13	0	245
8:00 AM	1	24	13	0	24	58	0	0	1	0	0	0	13	0	11	0	145
8:15 AM	0	36	17	0	27	65	0	0	0	0	0	0	6	0	4	0	155
8:30 AM	0	31	12	0	36	74	1	0	0	2	0	0	10	0	4	0	170
8:45 AM	0	34	17	0	37	51	0	0	0	0	0	0	13	1	9	0	162
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	228	183	0	189	455	2	0	3	4	2	0	120	1	55	0	1245
APPROACH %'s :	0.72%	55.07%	44.20%	0.00%	29.26%	70.43%	0.31%	0.00%	33.33%	44.44%	22.22%	0.00%	68.18%	0.57%	31.25%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	141	135	0	92	251	0	0	2	0	2	0	73	0	35	0	732
PEAK HR FACTOR :	0.250	0.750	0.563	0.000	0.767	0.872	0.000	0.000	0.500	0.000	0.250	0.000	0.570	0.000	0.673	0.000	0.747
		0.647				0.841				0.500				0.692			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	1	0	0	0	1	0	0	1	0	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	49	9	0	17	37	0	0	0	0	0	0	21	0	21	0	154
4:15 PM	0	35	14	0	29	39	0	0	0	0	0	0	11	0	28	0	156
4:30 PM	0	58	15	0	22	34	0	0	0	0	0	0	15	0	29	0	173
4:45 PM	0	47	14	0	31	35	0	0	0	0	0	0	27	0	24	0	178
5:00 PM	0	43	18	0	23	39	0	0	0	0	0	0	26	0	34	0	183
5:15 PM	0	56	25	0	18	36	0	0	0	0	0	0	35	0	23	0	193
5:30 PM	0	62	20	0	23	44	0	0	0	0	0	0	22	0	29	0	200
5:45 PM	0	51	16	0	23	35	0	0	0	0	0	0	23	0	20	0	168
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	401	131	0	186	299	0	0	0	0	0	0	180	0	208	0	1405
APPROACH %'s :	0.00%	75.38%	24.62%	0.00%	38.35%	61.65%	0.00%	0.00%					46.39%	0.00%	53.61%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	208	77	0	95	154	0	0	0	0	0	0	110	0	110	0	754
PEAK HR FACTOR :	0.000	0.839	0.770	0.000	0.766	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.786	0.000	0.809	0.000	0.943
		0.869				0.929								0.917			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Silver Spur Rd & Drybank Dr
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-012
Date: 9/14/2017

Total

NS/EW Streets:	Silver Spur Rd				Silver Spur Rd				Drybank Dr				Drybank Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	39	0	1	2	64	7	0	9	0	5	1	0	0	5	0	138
7:15 AM	5	56	1	1	2	62	9	1	11	0	1	0	0	0	1	0	150
7:30 AM	8	120	1	0	1	86	8	0	11	0	5	0	0	0	0	0	240
7:45 AM	11	96	2	4	1	138	13	0	6	0	4	0	2	0	4	0	281
8:00 AM	15	50	2	0	3	75	9	0	15	0	7	0	1	2	1	0	180
8:15 AM	12	56	1	1	1	97	13	0	8	1	3	0	2	0	5	0	200
8:30 AM	8	85	2	2	4	107	21	0	8	0	3	0	1	1	2	0	244
8:45 AM	13	85	2	1	16	121	26	3	6	0	5	0	0	0	2	0	280
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	77	587	11	10	30	750	106	4	74	1	33	1	6	3	20	0	1713
APPROACH %'s :	11.24%	85.69%	1.61%	1.46%	3.37%	84.27%	11.91%	0.45%	67.89%	0.92%	30.28%	0.92%	20.69%	10.34%	68.97%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	46	287	7	7	9	417	56	0	37	1	17	0	6	3	12	0	905
PEAK HR FACTOR :	0.767	0.747	0.875	0.438	0.563	0.755	0.667	0.000	0.617	0.250	0.607	0.000	0.750	0.375	0.600	0.000	0.805
	0.768				0.793				0.625				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	14	85	2	0	13	96	35	3	48	0	26	0	3	1	22	0	348
4:15 PM	10	94	0	0	7	139	44	1	52	1	18	0	4	1	10	0	381
4:30 PM	15	95	1	2	12	118	32	0	48	1	21	0	2	3	7	0	357
4:45 PM	6	92	4	0	21	126	48	2	47	3	15	0	1	0	13	0	378
5:00 PM	15	115	3	2	18	121	34	2	59	1	13	0	2	2	18	0	405
5:15 PM	16	97	3	0	20	123	37	1	45	5	23	0	0	3	23	0	396
5:30 PM	10	77	1	3	10	109	27	1	59	1	22	0	1	1	16	0	338
5:45 PM	8	119	3	0	15	71	38	1	50	2	15	0	0	1	13	0	336
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	94	774	17	7	116	903	295	11	408	14	153	0	13	12	122	0	2939
APPROACH %'s :	10.54%	86.77%	1.91%	0.78%	8.75%	68.15%	22.26%	0.83%	70.96%	2.43%	26.61%	0.00%	8.84%	8.16%	82.99%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	52	399	11	4	71	488	151	5	199	10	72	0	5	8	61	0	1536
PEAK HR FACTOR :	0.813	0.867	0.688	0.500	0.845	0.968	0.786	0.625	0.843	0.500	0.783	0.000	0.625	0.667	0.663	0.000	0.948
	0.863				0.907				0.962				0.712				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Silver Spur Rd & Crenshaw Blvd
City: Rolling Hills Estates
Control: Signalized

Project ID: 17-5573-014
Date: 9/14/2017

Total

NS/EW Streets:	Silver Spur Rd				Silver Spur Rd				Crenshaw Blvd				Crenshaw Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1.5	0.5	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	79	0	12	0	14	183	0	0	0	90	71	0	449
7:15 AM	0	0	0	0	59	0	21	0	27	193	0	0	0	146	101	0	547
7:30 AM	0	0	0	0	86	0	31	0	49	272	0	0	1	190	138	0	767
7:45 AM	0	0	0	0	127	0	20	0	66	291	0	0	0	166	120	0	790
8:00 AM	0	0	0	0	64	0	23	1	42	266	0	0	0	116	87	0	599
8:15 AM	0	0	0	0	103	0	30	0	73	265	0	0	0	150	101	0	722
8:30 AM	0	0	0	0	97	0	35	0	38	264	0	0	0	162	112	0	708
8:45 AM	0	0	0	0	77	0	26	1	48	259	0	0	0	180	127	0	718
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	692	0	198	2	357	1993	0	0	1	1200	857	0	5300
APPROACH %'s :					77.58%	0.00%	22.20%	0.22%	15.19%	84.81%	0.00%	0.00%	0.05%	58.31%	41.64%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	380	0	104	1	230	1094	0	0	1	622	446	0	2878
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.748	0.000	0.839	0.250	0.788	0.940	0.000	0.000	0.250	0.818	0.808	0.000	0.911
					0.825				0.927				0.812				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	1.5	0.5	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	148	0	78	1	46	134	0	0	0	161	118	0	687
4:15 PM	0	0	0	0	131	0	68	0	45	132	0	0	0	158	135	0	669
4:30 PM	0	0	0	0	131	0	77	0	45	149	0	0	0	186	107	0	695
4:45 PM	0	0	0	0	92	0	76	0	44	136	0	0	0	192	128	0	668
5:00 PM	0	0	0	0	148	0	86	0	45	114	0	0	0	191	124	0	708
5:15 PM	0	0	0	0	142	0	54	0	38	103	0	0	1	223	122	1	684
5:30 PM	0	0	0	0	123	0	62	0	34	146	0	0	1	200	97	0	663
5:45 PM	0	0	0	0	112	0	68	0	35	142	0	0	0	227	142	0	726
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	1027	0	569	1	332	1056	0	0	2	1538	973	1	5500
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	64.31%	0.00%	35.63%	0.06%	23.92%	76.08%	0.00%	0.00%	0.08%	61.18%	38.70%	0.04%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	525	0	270	0	152	505	0	0	2	841	485	1	2781
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.887	0.000	0.785	0.000	0.844	0.865	0.000	0.000	0.500	0.926	0.854	0.250	0.958
					0.849				0.913				0.900				

Prepared by NDS/ATD

VOLUME

Silver Spur Rd S/O Kingspine Rd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_001

DAILY TOTALS	NB	SB	EB	WB	Total
	6,550	6,667	0	0	13,217

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	2		15						17		12:00	91		77						168	
00:15	6		8						14		12:15	107		92						199	
00:30	2		6						8		12:30	101		111						212	
00:45	2	12	2	31					4	43	12:45	108	407	99	379					207	786
01:00	1		5						6		13:00	91		89						180	
01:15	0		4						4		13:15	98		88						186	
01:30	0		2						2		13:30	108		112						220	
01:45	0	1	2	13					2	14	13:45	127	424	103	392					230	816
02:00	0		1						1		14:00	110		116						226	
02:15	2		3						5		14:15	129		149						278	
02:30	0		2						2		14:30	110		135						245	
02:45	0	2	0	6					0	8	14:45	157	506	159	559					316	1065
03:00	0		2						2		15:00	166		143						309	
03:15	0		1						1		15:15	190		127						317	
03:30	2		3						5		15:30	156		125						281	
03:45	2	4	1	7					3	11	15:45	162	674	136	531					298	1205
04:00	1		3						4		16:00	169		131						300	
04:15	3		3						6		16:15	120		123						243	
04:30	2		3						5		16:30	128		121						249	
04:45	5	11	1	10					6	21	16:45	143	560	141	516					284	1076
05:00	7		3						10		17:00	118		130						248	
05:15	9		5						14		17:15	140		137						277	
05:30	19		7						26		17:30	89		152						241	
05:45	21	56	13	28					34	84	17:45	110	457	124	543					234	1000
06:00	29		8						37		18:00	102		144						246	
06:15	36		30						66		18:15	71		114						185	
06:30	54		59						113		18:30	103		121						224	
06:45	81	200	123	220					204	420	18:45	87	363	101	480					188	843
07:00	125		74						199		19:00	53		89						142	
07:15	85		85						170		19:15	39		95						134	
07:30	151		129						280		19:30	43		78						121	
07:45	152	513	156	444					308	957	19:45	45	180	94	356					139	536
08:00	133		113						246		20:00	54		63						117	
08:15	141		107						248		20:15	37		72						109	
08:30	173		97						270		20:30	27		78						105	
08:45	193	640	119	436					312	1076	20:45	26	144	92	305					118	449
09:00	149		125						274		21:00	28		48						76	
09:15	106		85						191		21:15	20		54						74	
09:30	118		83						201		21:30	18		46						64	
09:45	104	477	84	377					188	854	21:45	10	76	57	205					67	281
10:00	110		88						198		22:00	9		35						44	
10:15	110		76						186		22:15	10		16						26	
10:30	93		88						181		22:30	8		21						29	
10:45	106	419	86	338					192	757	22:45	5	32	17	89					22	121
11:00	90		77						167		23:00	7		17						24	
11:15	96		88						184		23:15	3		27						30	
11:30	92		82						174		23:30	2		8						10	
11:45	99	377	92	339					191	716	23:45	3	15	11	63					14	78
TOTALS		2712		2249						4961	TOTALS		3838		4418						8256
SPLIT %		54.7%		45.3%						37.5%	SPLIT %		46.5%		53.5%						62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,550	6,667	0	0	13,217

AM Peak Hour	08:15	07:30			08:15	PM Peak Hour	15:15	14:15			14:45
AM Pk Volume	656	505			1104	PM Pk Volume	677	586			1223
Pk Hr Factor	0.850	0.809			0.885	Pk Hr Factor	0.891	0.921			0.965
7 - 9 Volume	1153	880	0	0	2033	4 - 6 Volume	1017	1059	0	0	2076
7 - 9 Peak Hour	08:00	07:30			07:30	4 - 6 Peak Hour	16:00	16:45			16:00
7 - 9 Pk Volume	640	505	0	0	1082	4 - 6 Pk Volume	560	560	0	0	1076
Pk Hr Factor	0.829	0.809	0.000	0.000	0.878	Pk Hr Factor	0.828	0.921	0.000	0.000	0.897

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr N W/O Hidden Valley Rd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,391	9,000	18,391

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		16		25		12:00			114		133		247	
00:15			4		6		10		12:15			137		145		282	
00:30			3		4		7		12:30			145		136		281	
00:45			5	21	3	29	8	50	12:45			159	555	139	553	298	1108
01:00			2		6		8		13:00			137		138		275	
01:15			4		4		8		13:15			139		135		274	
01:30			2		3		5		13:30			149		166		315	
01:45			3	11	2	15	5	26	13:45			156	581	135	574	291	1155
02:00			2		8		10		14:00			141		150		291	
02:15			4		3		7		14:15			167		149		316	
02:30			0		2		2		14:30			152		159		311	
02:45			1	7	2	15	3	22	14:45			212	672	160	618	372	1290
03:00			1		2		3		15:00			188		161		349	
03:15			2		0		2		15:15			193		148		341	
03:30			4		5		9		15:30			194		178		372	
03:45			5	12	3	10	8	22	15:45			160	735	169	656	329	1391
04:00			4		7		11		16:00			200		146		346	
04:15			11		4		15		16:15			157		167		324	
04:30			11		8		19		16:30			183		163		346	
04:45			17	43	2	21	19	64	16:45			173	713	186	662	359	1375
05:00			22		8		30		17:00			166		169		335	
05:15			32		10		42		17:15			194		192		386	
05:30			36		13		49		17:30			137		172		309	
05:45			42	132	21	52	63	184	17:45			142	639	171	704	313	1343
06:00			47		35		82		18:00			149		158		307	
06:15			56		59		115		18:15			141		154		295	
06:30			91		101		192		18:30			172		142		314	
06:45			150	344	147	342	297	686	18:45			164	626	125	579	289	1205
07:00			163		148		311		19:00			111		127		238	
07:15			172		145		317		19:15			81		123		204	
07:30			264		166		430		19:30			110		91		201	
07:45			234	833	189	648	423	1481	19:45			86	388	84	425	170	813
08:00			190		174		364		20:00			82		96		178	
08:15			225		149		374		20:15			76		95		171	
08:30			196		199		395		20:30			50		114		164	
08:45			173	784	164	686	337	1470	20:45			58	266	115	420	173	686
09:00			166		145		311		21:00			60		105		165	
09:15			158		130		288		21:15			42		91		133	
09:30			152		136		288		21:30			36		69		105	
09:45			149	625	115	526	264	1151	21:45			38	176	59	324	97	500
10:00			124		101		225		22:00			28		35		63	
10:15			142		97		239		22:15			27		19		46	
10:30			138		157		295		22:30			32		27		59	
10:45			142	546	112	467	254	1013	22:45			21	108	22	103	43	211
11:00			126		120		246		23:00			14		23		37	
11:15			135		127		262		23:15			13		35		48	
11:30			130		113		243		23:30			23		9		32	
11:45			123	514	137	497	260	1011	23:45			10	60	7	74	17	134
TOTALS				3872		3308		**7180**	**TOTALS**				5519		5692		**11211**
SPLIT %				53.9%		46.1%		**39.0%**	**SPLIT %**				49.2%		50.8%		**61.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,391	9,000	18,391

AM Peak Hour			07:30	07:45	**07:30**	**PM Peak Hour**			14:45	16:45	**14:45**
AM Pk Volume			913	711	**1591**	**PM Pk Volume**			787	719	**1434**
Pk Hr Factor			0.865	0.893	**0.925**	**Pk Hr Factor**			0.928	0.936	**0.964**
7 - 9 Volume	0	0	1617	1334	**2951**	**4 - 6 Volume**	0	0	1352	1366	**2718**
7 - 9 Peak Hour			07:30	07:45	**07:30**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	913	711	**1591**	**4 - 6 Pk Volume**	0	0	716	719	**1426**
Pk Hr Factor	0.000	0.000	0.865	0.893	**0.925**	**Pk Hr Factor**	0.000	0.000	0.923	0.936	**0.924**

Prepared by NDS/ATD

VOLUME

Hawthorne Blvd S/O Rolling Hills Rd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_003

DAILY TOTALS	NB	SB	EB	WB	Total
	15,085	14,734	0	0	29,819

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	17		37				54		12:00	205		204				409	
00:15	17		26				43		12:15	218		209				427	
00:30	9		15				24		12:30	226		217				443	
00:45	11	54	19	97			30	151	12:45	224	873	214	844			438	1717
01:00	10		13				23		13:00	233		215				448	
01:15	5		8				13		13:15	234		234				468	
01:30	6		9				15		13:30	218		259				477	
01:45	6	27	12	42			18	69	13:45	235	920	271	979			506	1899
02:00	4		7				11		14:00	222		239				461	
02:15	8		11				19		14:15	250		291				541	
02:30	0		7				7		14:30	208		287				495	
02:45	1	13	3	28			4	41	14:45	272	952	273	1090			545	2042
03:00	3		5				8		15:00	281		290				571	
03:15	7		5				12		15:15	331		235				566	
03:30	8		7				15		15:30	278		292				570	
03:45	13	31	4	21			17	52	15:45	314	1204	284	1101			598	2305
04:00	15		7				22		16:00	249		246				495	
04:15	17		8				25		16:15	277		317				594	
04:30	28		6				34		16:30	272		291				563	
04:45	35	95	9	30			44	125	16:45	229	1027	348	1202			577	2229
05:00	40		11				51		17:00	256		319				575	
05:15	54		15				69		17:15	255		357				612	
05:30	72		30				102		17:30	222		356				578	
05:45	84	250	25	81			109	331	17:45	205	938	317	1349			522	2287
06:00	94		44				138		18:00	203		314				517	
06:15	107		55				162		18:15	201		344				545	
06:30	156		69				225		18:30	164		305				469	
06:45	187	544	117	285			304	829	18:45	187	755	279	1242			466	1997
07:00	262		112				374		19:00	141		251				392	
07:15	258		172				430		19:15	148		225				373	
07:30	314		211				525		19:30	127		190				317	
07:45	342	1176	251	746			593	1922	19:45	140	556	194	860			334	1416
08:00	401		266				667		20:00	95		193				288	
08:15	398		202				600		20:15	100		154				254	
08:30	371		208				579		20:30	91		201				292	
08:45	390	1560	254	930			644	2490	20:45	86	372	156	704			242	1076
09:00	279		198				477		21:00	102		142				244	
09:15	304		172				476		21:15	90		138				228	
09:30	284		162				446		21:30	80		139				219	
09:45	288	1155	165	697			453	1852	21:45	55	327	89	508			144	835
10:00	233		158				391		22:00	49		85				134	
10:15	260		164				424		22:15	42		85				127	
10:30	239		173				412		22:30	37		63				100	
10:45	275	1007	192	687			467	1694	22:45	31	159	67	300			98	459
11:00	239		168				407		23:00	38		39				77	
11:15	269		186				455		23:15	25		45				70	
11:30	239		204				443		23:30	24		37				61	
11:45	235	982	198	756			433	1738	23:45	21	108	34	155			55	263
TOTALS		6894		4400				11294	TOTALS		8191		10334				18525
SPLIT %		61.0%		39.0%				37.9%	SPLIT %		44.2%		55.8%				62.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	15,085	14,734	0	0	29,819

AM Peak Hour	08:00	07:30				08:00	PM Peak Hour	15:00	16:45				16:45
AM Pk Volume	1560	930				2490	PM Pk Volume	1204	1380				2342
Pk Hr Factor	0.973	0.874				0.933	Pk Hr Factor	0.909	0.966				0.957
7 - 9 Volume	2736	1676	0	0		4412	4 - 6 Volume	1965	2551	0	0		4516
7 - 9 Peak Hour	08:00	07:30				08:00	4 - 6 Peak Hour	16:15	16:45				16:45
7 - 9 Pk Volume	1560	930	0	0		2490	4 - 6 Pk Volume	1034	1380	0	0		2342
Pk Hr Factor	0.973	0.874	0.000	0.000		0.933	Pk Hr Factor	0.933	0.966	0.000	0.000		0.957

Prepared by NDS/ATD

VOLUME

Hawthorne Blvd S/O Palos Verdes Dr N

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_004

DAILY TOTALS	NB	SB	EB	WB	Total
	14,215	15,315	0	0	29,530

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	18		39				57		12:00	195		213				408	
00:15	20		31				51		12:15	211		275				486	
00:30	13		23				36		12:30	219		252				471	
00:45	14	65	22	115			36	180	12:45	214	839	220	960			434	1799
01:00	12		12				24		13:00	214		221				435	
01:15	3		10				13		13:15	215		281				496	
01:30	8		9				17		13:30	243		339				582	
01:45	5	28	12	43			17	71	13:45	206	878	326	1167			532	2045
02:00	6		5				11		14:00	231		313				544	
02:15	9		13				22		14:15	207		311				518	
02:30	2		5				7		14:30	216		380				596	
02:45	3	20	5	28			8	48	14:45	226	880	353	1357			579	2237
03:00	3		4				7		15:00	271		330				601	
03:15	9		8				17		15:15	284		294				578	
03:30	7		5				12		15:30	253		342				595	
03:45	15	34	7	24			22	58	15:45	263	1071	289	1255			552	2326
04:00	12		8				20		16:00	219		288				507	
04:15	20		11				31		16:15	237		254				491	
04:30	39		12				51		16:30	252		289				541	
04:45	28	99	12	43			40	142	16:45	207	915	273	1104			480	2019
05:00	49		11				60		17:00	271		301				572	
05:15	69		13				82		17:15	213		342				555	
05:30	77		29				106		17:30	216		307				523	
05:45	99	294	27	80			126	374	17:45	209	909	273	1223			482	2132
06:00	87		49				136		18:00	215		332				547	
06:15	119		58				177		18:15	190		313				503	
06:30	163		86				249		18:30	175		288				463	
06:45	199	568	173	366			372	934	18:45	191	771	260	1193			451	1964
07:00	244		107				351		19:00	144		261				405	
07:15	281		155				436		19:15	155		208				363	
07:30	278		218				496		19:30	109		194				303	
07:45	325	1128	255	735			580	1863	19:45	116	524	211	874			327	1398
08:00	333		167				500		20:00	97		178				275	
08:15	357		183				540		20:15	97		167				264	
08:30	342		180				522		20:30	84		195				279	
08:45	314	1346	231	761			545	2107	20:45	77	355	134	674			211	1029
09:00	250		187				437		21:00	86		155				241	
09:15	261		183				444		21:15	72		120				192	
09:30	289		161				450		21:30	74		135				209	
09:45	256	1056	201	732			457	1788	21:45	59	291	91	501			150	792
10:00	211		184				395		22:00	70		90				160	
10:15	238		155				393		22:15	44		103				147	
10:30	222		150				372		22:30	35		63				98	
10:45	266	937	217	706			483	1643	22:45	30	179	68	324			98	503
11:00	227		194				421		23:00	35		41				76	
11:15	255		188				443		23:15	27		50				77	
11:30	222		235				457		23:30	26		43				69	
11:45	213	917	261	878			474	1795	23:45	23	111	38	172			61	283
TOTALS		6492		4511				11003	TOTALS		7723		10804				18527
SPLIT %		59.0%		41.0%				37.3%	SPLIT %		41.7%		58.3%				62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	14,215	15,315	0	0	29,530

AM Peak Hour	07:45	11:45			07:45	PM Peak Hour	15:00	14:15			14:30
AM Pk Volume	1357	1001			2142	PM Pk Volume	1071	1374			2354
Pk Hr Factor	0.950	0.910			0.923	Pk Hr Factor	0.943	0.904			0.979
7 - 9 Volume	2474	1496	0	0	3970	4 - 6 Volume	1824	2327	0	0	4151
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:15	16:45			16:30
7 - 9 Pk Volume	1357	823	0	0	2142	4 - 6 Pk Volume	967	1223	0	0	2148
Pk Hr Factor	0.950	0.807	0.000	0.000	0.923	Pk Hr Factor	0.892	0.894	0.000	0.000	0.939

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr N W/O Crenshaw Blvd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,116	10,167	21,283

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			16	21	37	12:00			136	121	257
00:15			12	17	29	12:15			146	145	291
00:30			11	13	24	12:30			170	171	341
00:45			7	46 7 58	14 104	12:45			173	625 135 572	308 1197
01:00			3	6	9	13:00			168	144	312
01:15			2	6	8	13:15			172	141	313
01:30			6	2	8	13:30			159	198	357
01:45			4	15 4 18	8 33	13:45			171	670 145 628	316 1298
02:00			4	4	8	14:00			167	148	315
02:15			8	7	15	14:15			183	149	332
02:30			3	2	5	14:30			213	184	397
02:45			4	19 3 16	7 35	14:45			235	798 160 641	395 1439
03:00			3	3	6	15:00			247	175	422
03:15			4	5	9	15:15			201	149	350
03:30			7	4	11	15:30			251	183	434
03:45			3	17 6 18	9 35	15:45			199	898 192 699	391 1597
04:00			5	7	12	16:00			194	178	372
04:15			15	10	25	16:15			203	171	374
04:30			19	19	38	16:30			212	133	345
04:45			19	58 5 41	24 99	16:45			206	815 181 663	387 1478
05:00			33	8	41	17:00			223	188	411
05:15			48	16	64	17:15			210	179	389
05:30			57	19	76	17:30			167	179	346
05:45			66	204 40 83	106 287	17:45			171	771 181 727	352 1498
06:00			53	44	97	18:00			178	188	366
06:15			81	79	160	18:15			189	186	375
06:30			111	134	245	18:30			227	157	384
06:45			144	389 226 483	370 872	18:45			233	827 157 688	390 1515
07:00			212	170	382	19:00			148	145	293
07:15			213	185	398	19:15			109	111	220
07:30			234	255	489	19:30			105	120	225
07:45			272	931 238 848	510 1779	19:45			107	469 132 508	239 977
08:00			249	208	457	20:00			83	106	189
08:15			206	186	392	20:15			81	113	194
08:30			230	167	397	20:30			75	124	199
08:45			195	880 168 729	363 1609	20:45			77	316 125 468	202 784
09:00			185	154	339	21:00			101	139	240
09:15			168	144	312	21:15			63	127	190
09:30			172	153	325	21:30			46	86	132
09:45			167	692 132 583	299 1275	21:45			53	263 72 424	125 687
10:00			146	133	279	22:00			50	51	101
10:15			166	105	271	22:15			39	33	72
10:30			130	126	256	22:30			37	42	79
10:45			152	594 129 493	281 1087	22:45			32	158 34 160	66 318
11:00			150	109	259	23:00			28	30	58
11:15			127	143	270	23:15			25	31	56
11:30			149	112	261	23:30			17	30	47
11:45			143	569 147 511	290 1080	23:45			22	92 17 108	39 200
TOTALS				4414 3881	**8295**	**TOTALS**				6702 6286	**12988**
SPLIT %				53.2% 46.8%	**39.0%**	**SPLIT %**				51.6% 48.4%	**61.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,116	10,167	21,283

AM Peak Hour			07:15	07:30	**07:15**	**PM Peak Hour**			14:45	17:30	**14:45**
AM Pk Volume			968	887	**1854**	**PM Pk Volume**			934	734	**1601**
Pk Hr Factor			0.890	0.870	**0.909**	**Pk Hr Factor**			0.930	0.976	**0.922**
7 - 9 Volume	0	0	1811	1577	**3388**	**4 - 6 Volume**	0	0	1586	1390	**2976**
7 - 9 Peak Hour			07:15	07:30	**07:15**	**4 - 6 Peak Hour**			16:30	16:45	**16:45**
7 - 9 Pk Volume	0	0	968	887	**1854**	**4 - 6 Pk Volume**	0	0	851	727	**1533**
Pk Hr Factor	0.000	0.000	0.890	0.870	**0.909**	**Pk Hr Factor**	0.000	0.000	0.954	0.967	**0.932**

Prepared by NDS/ATD

VOLUME

Crenshaw Blvd N/O Palos Verdes Dr N

Day: Thursday
Date: 9/14/2017

City: Palos Verdes Peninsula
Project #: CA17_5574_006

DAILY TOTALS	NB	SB	EB	WB	Total
	13,491	12,773	0	0	26,264

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	14		21				35		12:00	173		184				357	
00:15	9		15				24		12:15	194		181				375	
00:30	9		13				22		12:30	192		188				380	
00:45	11	43	10	59			21	102	12:45	200	759	195	748			395	1507
01:00	5		7				12		13:00	173		187				360	
01:15	1		8				9		13:15	208		196				404	
01:30	5		4				9		13:30	194		228				422	
01:45	5	16	4	23			9	39	13:45	170	745	205	816			375	1561
02:00	1		9				10		14:00	214		203				417	
02:15	6		9				15		14:15	207		228				435	
02:30	1		2				3		14:30	182		205				387	
02:45	5	13	2	22			7	35	14:45	261	864	269	905			530	1769
03:00	3		4				7		15:00	379		239				618	
03:15	0		10				10		15:15	428		253				681	
03:30	3		12				15		15:30	408		268				676	
03:45	6	12	4	30			10	42	15:45	280	1495	234	994			514	2489
04:00	3		12				15		16:00	279		224				503	
04:15	12		9				21		16:15	274		214				488	
04:30	9		10				19		16:30	285		228				513	
04:45	14	38	15	46			29	84	16:45	234	1072	242	908			476	1980
05:00	12		11				23		17:00	225		251				476	
05:15	20		20				40		17:15	269		259				528	
05:30	43		21				64		17:30	244		258				502	
05:45	42	117	36	88			78	205	17:45	246	984	267	1035			513	2019
06:00	42		51				93		18:00	225		289				514	
06:15	46		86				132		18:15	179		253				432	
06:30	65		89				154		18:30	137		221				358	
06:45	134	287	141	367			275	654	18:45	157	698	221	984			378	1682
07:00	201		143				344		19:00	147		202				349	
07:15	187		197				384		19:15	119		187				306	
07:30	233		231				464		19:30	132		155				287	
07:45	384	1005	240	811			624	1816	19:45	97	495	136	680			233	1175
08:00	341		237				578		20:00	119		138				257	
08:15	413		273				686		20:15	122		138				260	
08:30	369		252				621		20:30	72		139				211	
08:45	321	1444	213	975			534	2419	20:45	119	432	130	545			249	977
09:00	328		214				542		21:00	105		99				204	
09:15	235		164				399		21:15	86		115				201	
09:30	202		163				365		21:30	55		92				147	
09:45	187	952	145	686			332	1638	21:45	42	288	96	402			138	690
10:00	169		157				326		22:00	33		69				102	
10:15	195		140				335		22:15	24		44				68	
10:30	187		152				339		22:30	24		49				73	
10:45	170	721	147	596			317	1317	22:45	24	105	50	212			74	317
11:00	170		165				335		23:00	36		42				78	
11:15	237		181				418		23:15	16		32				48	
11:30	217		183				400		23:30	16		24				40	
11:45	190	814	180	709			370	1523	23:45	24	92	34	132			58	224
TOTALS		5462		4412				9874	TOTALS		8029		8361				16390
SPLIT %		55.3%		44.7%				37.6%	SPLIT %		49.0%		51.0%				62.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	13,491	12,773	0	0	26,264

AM Peak Hour	07:45	07:45			07:45	PM Peak Hour	15:00	17:15			14:45
AM Pk Volume	1507	1002			2509	PM Pk Volume	1495	1073			2505
Pk Hr Factor	0.912	0.918			0.914	Pk Hr Factor	0.873	0.928			0.920
7 - 9 Volume	2449	1786	0	0	4235	4 - 6 Volume	2056	1943	0	0	3999
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:00	17:00			17:00
7 - 9 Pk Volume	1507	1002	0	0	2509	4 - 6 Pk Volume	1072	1035	0	0	2019
Pk Hr Factor	0.912	0.918	0.000	0.000	0.914	Pk Hr Factor	0.940	0.969	0.000	0.000	0.956

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr N E/O Eastvale Rd

Day: Thursday
Date: 9/14/2017

City: Palos Verdes Peninsula
Project #: CA17_5574_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,216	13,021	26,237

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					21		28		49		12:00					174		155		329	
00:15					9		14		23		12:15					205		191		396	
00:30					19		20		39		12:30					207		190		397	
00:45					11	60	12	74	23	134	12:45					193	779	192	728	385	1507
01:00					4		7		11		13:00					198		173		371	
01:15					5		8		13		13:15					196		187		383	
01:30					6		5		11		13:30					206		232		438	
01:45					5	20	6	26	11	46	13:45					202	802	186	778	388	1580
02:00					6		6		12		14:00					224		147		371	
02:15					6		6		12		14:15					194		223		417	
02:30					11		9		20		14:30					210		219		429	
02:45					5	28	7	28	12	56	14:45					221	849	237	826	458	1675
03:00					3		5		8		15:00					241		219		460	
03:15					7		7		14		15:15					170		207		377	
03:30					8		3		11		15:30					205		215		420	
03:45					6	24	15	30	21	54	15:45					224	840	225	866	449	1706
04:00					9		9		18		16:00					215		221		436	
04:15					18		18		36		16:15					220		220		440	
04:30					27		20		47		16:30					206		194		400	
04:45					20	74	10	57	30	131	16:45					238	879	249	884	487	1763
05:00					56		20		76		17:00					219		238		457	
05:15					70		21		91		17:15					221		233		454	
05:30					96		40		136		17:30					184		213		397	
05:45					132	354	58	139	190	493	17:45					220	844	252	936	472	1780
06:00					119		72		191		18:00					224		245		469	
06:15					138		126		264		18:15					209		254		463	
06:30					188		185		373		18:30					198		242		440	
06:45					225	670	256	639	481	1309	18:45					172	803	258	999	430	1802
07:00					266		189		455		19:00					183		213		396	
07:15					226		251		477		19:15					137		174		311	
07:30					243		287		530		19:30					155		172		327	
07:45					242	977	227	954	469	1931	19:45					141	616	195	754	336	1370
08:00					237		168		405		20:00					172		176		348	
08:15					217		180		397		20:15					128		147		275	
08:30					268		232		500		20:30					102		141		243	
08:45					234	956	218	798	452	1754	20:45					109	511	121	585	230	1096
09:00					243		204		447		21:00					146		98		244	
09:15					227		184		411		21:15					128		98		226	
09:30					199		192		391		21:30					110		100		210	
09:45					173	842	207	787	380	1629	21:45					83	467	94	390	177	857
10:00					173		190		363		22:00					75		77		152	
10:15					215		159		374		22:15					56		59		115	
10:30					183		166		349		22:30					50		49		99	
10:45					172	743	165	680	337	1423	22:45					40	221	52	237	92	458
11:00					183		178		361		23:00					51		33		84	
11:15					157		170		327		23:15					34		41		75	
11:30					182		174		356		23:30					21		21		42	
11:45					196	718	166	688	362	1406	23:45					33	139	43	138	76	277
TOTALS						5466		4900		10366	TOTALS						7750		8121		15871
SPLIT %						52.7%		47.3%		39.5%	SPLIT %						48.8%		51.2%		60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,216	13,021	26,237

AM Peak Hour			07:00	06:45	06:45	PM Peak Hour			16:30	18:00	17:45
AM Pk Volume			977	983	1943	PM Pk Volume			884	999	1844
Pk Hr Factor			0.918	0.856	0.917	Pk Hr Factor			0.929	0.968	0.977
7 - 9 Volume	0	0	1933	1752	3685	4 - 6 Volume	0	0	1723	1820	3543
7 - 9 Peak Hour			07:00	07:00	07:00	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	977	954	1931	4 - 6 Pk Volume	0	0	884	936	1798
Pk Hr Factor	0.000	0.000	0.918	0.831	0.911	Pk Hr Factor	0.000	0.000	0.929	0.929	0.923

Prepared by NDS/ATD

VOLUME

Rolling Hills Rd N/O Palomino Ln

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_008

DAILY TOTALS	NB	SB	EB	WB	Total
	4,260	5,569	0	0	9,829

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	2		11						13		12:00	78		106						184	
00:15	2		6						8		12:15	72		89						161	
00:30	3		2						5		12:30	84		76						160	
00:45	0	7	1	20					1	27	12:45	95	329	93	364					188	693
01:00	0		3						3		13:00	77		78						155	
01:15	0		3						3		13:15	74		76						150	
01:30	0		2						2		13:30	64		87						151	
01:45	3	3	2	10					5	13	13:45	71	286	82	323					153	609
02:00	2		2						4		14:00	79		94						173	
02:15	0		1						1		14:15	78		100						178	
02:30	2		0						2		14:30	76		117						193	
02:45	0	4	1	4					1	8	14:45	70	303	127	438					197	741
03:00	0		0						0		15:00	97		140						237	
03:15	1		1						2		15:15	81		145						226	
03:30	1		0						1		15:30	92		177						269	
03:45	3	5	0	1					3	6	15:45	61	331	151	613					212	944
04:00	1		2						3		16:00	68		138						206	
04:15	1		2						3		16:15	46		127						173	
04:30	5		2						7		16:30	63		146						209	
04:45	3	10	1	7					4	17	16:45	55	232	149	560					204	792
05:00	7		5						12		17:00	64		143						207	
05:15	7		2						9		17:15	78		165						243	
05:30	18		8						26		17:30	55		169						224	
05:45	27	59	9	24					36	83	17:45	54	251	150	627					204	878
06:00	26		6						32		18:00	46		146						192	
06:15	31		15						46		18:15	54		118						172	
06:30	47		25						72		18:30	59		80						139	
06:45	59	163	41	87					100	250	18:45	65	224	97	441					162	665
07:00	68		29						97		19:00	58		93						151	
07:15	52		52						104		19:15	42		74						116	
07:30	40		63						103		19:30	50		58						108	
07:45	88	248	88	232					176	480	19:45	49	199	69	294					118	493
08:00	71		86						157		20:00	45		72						117	
08:15	74		69						143		20:15	34		66						100	
08:30	106		56						162		20:30	32		66						98	
08:45	96	347	71	282					167	629	20:45	21	132	46	250					67	382
09:00	88		74						162		21:00	21		51						72	
09:15	71		59						130		21:15	16		36						52	
09:30	102		58						160		21:30	12		32						44	
09:45	94	355	52	243					146	598	21:45	12	61	24	143					36	204
10:00	83		43						126		22:00	7		24						31	
10:15	83		61						144		22:15	8		14						22	
10:30	78		53						131		22:30	11		16						27	
10:45	70	314	71	228					141	542	22:45	4	30	17	71					21	101
11:00	89		57						146		23:00	4		11						15	
11:15	77		81						158		23:15	3		12						15	
11:30	79		66						145		23:30	7		7						14	
11:45	103	348	68	272					171	620	23:45	5	19	5	35					10	54
TOTALS		1863		1410						3273	TOTALS		2397		4159						6556
SPLIT %		56.9%		43.1%						33.3%	SPLIT %		36.6%		63.4%						66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,260	5,569	0	0	9,829

AM Peak Hour	08:15	11:45			11:45	PM Peak Hour	14:45	17:15			15:00
AM Pk Volume	364	339			676	PM Pk Volume	340	630			944
Pk Hr Factor	0.858	0.800			0.918	Pk Hr Factor	0.876	0.932			0.877
7 - 9 Volume	595	514	0	0	1109	4 - 6 Volume	483	1187	0	0	1670
7 - 9 Peak Hour	08:00	07:30			07:45	4 - 6 Peak Hour	16:30	17:00			16:45
7 - 9 Pk Volume	347	306	0	0	638	4 - 6 Pk Volume	260	627	0	0	878
Pk Hr Factor	0.818	0.869	0.000	0.000	0.906	Pk Hr Factor	0.833	0.928	0.000	0.000	0.903

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr E S/O Club View Ln

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_009

DAILY TOTALS	NB	SB	EB	WB	Total
	5,193	5,394	0	0	10,587

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	7		8				15		12:00	81		65				146	
00:15	3		5				8		12:15	95		69				164	
00:30	3		2				5		12:30	106		101				207	
00:45	4	17	4	19			8	36	12:45	89	371	99	334			188	705
01:00	3		5				8		13:00	93		97				190	
01:15	3		1				4		13:15	105		122				227	
01:30	0		2				2		13:30	80		118				198	
01:45	2	8	3	11			5	19	13:45	101	379	102	439			203	818
02:00	0		0				0		14:00	77		124				201	
02:15	1		1				2		14:15	102		101				203	
02:30	0		1				1		14:30	94		118				212	
02:45	1	2	0	2			1	4	14:45	93	366	117	460			210	826
03:00	1		2				3		15:00	87		122				209	
03:15	1		0				1		15:15	113		109				222	
03:30	2		2				4		15:30	90		134				224	
03:45	1	5	2	6			3	11	15:45	61	351	113	478			174	829
04:00	1		0				1		16:00	73		135				208	
04:15	1		2				3		16:15	64		108				172	
04:30	0		1				1		16:30	62		120				182	
04:45	5	7	4	7			9	14	16:45	84	283	117	480			201	763
05:00	7		5				12		17:00	85		141				226	
05:15	6		4				10		17:15	85		138				223	
05:30	17		15				32		17:30	78		142				220	
05:45	21	51	7	31			28	82	17:45	59	307	131	552			190	859
06:00	29		18				47		18:00	65		116				181	
06:15	32		20				52		18:15	63		116				179	
06:30	57		20				77		18:30	71		104				175	
06:45	66	184	34	92			100	276	18:45	55	254	88	424			143	678
07:00	96		41				137		19:00	42		76				118	
07:15	93		59				152		19:15	57		71				128	
07:30	157		65				222		19:30	56		73				129	
07:45	136	482	84	249			220	731	19:45	63	218	74	294			137	512
08:00	87		66				153		20:00	40		55				95	
08:15	167		63				230		20:15	39		55				94	
08:30	127		45				172		20:30	24		41				65	
08:45	116	497	56	230			172	727	20:45	24	127	41	192			65	319
09:00	89		50				139		21:00	22		46				68	
09:15	88		61				149		21:15	18		48				66	
09:30	103		66				169		21:30	24		41				65	
09:45	93	373	66	243			159	616	21:45	9	73	34	169			43	242
10:00	89		60				149		22:00	9		23				32	
10:15	98		60				158		22:15	16		15				31	
10:30	112		77				189		22:30	13		18				31	
10:45	88	387	58	255			146	642	22:45	6	44	11	67			17	111
11:00	102		78				180		23:00	3		9				12	
11:15	96		83				179		23:15	9		10				19	
11:30	98		82				180		23:30	7		8				15	
11:45	87	383	83	326			170	709	23:45	5	24	7	34			12	58
TOTALS		2396		1471				3867	TOTALS		2797		3923				6720
SPLIT %		62.0%		38.0%				36.5%	SPLIT %		41.6%		58.4%				63.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,193	5,394	0	0	10,587

AM Peak Hour	07:30	11:00			07:30	PM Peak Hour	12:30	17:00			16:45
AM Pk Volume	547	326			825	PM Pk Volume	393	552			870
Pk Hr Factor	0.819	0.982			0.897	Pk Hr Factor	0.927	0.972			0.962
7 - 9 Volume	979	479	0	0	1458	4 - 6 Volume	590	1032	0	0	1622
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	547	278	0	0	825	4 - 6 Pk Volume	332	552	0	0	870
Pk Hr Factor	0.819	0.827	0.000	0.000	0.897	Pk Hr Factor	0.976	0.972	0.000	0.000	0.962

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr N W/O Strawberry Ln

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,834	16,358	33,192

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			29	23	52	12:00			215	207	422
00:15			17	21	38	12:15			241	217	458
00:30			22	18	40	12:30			231	245	476
00:45			14	82 22	84 36 166	12:45			257	944 234	903 491 1847
01:00			6	14	20	13:00			222	226	448
01:15			8	6	14	13:15			243	231	474
01:30			5	12	17	13:30			294	296	590
01:45			8	27 9	41 17 68	13:45			280	1039 284	1037 564 2076
02:00			7	15	22	14:00			221	274	495
02:15			6	14	20	14:15			309	313	622
02:30			8	8	16	14:30			268	277	545
02:45			8	29 7	44 15 73	14:45			311	1109 241	1105 552 2214
03:00			6	7	13	15:00			262	254	516
03:15			8	14	22	15:15			239	222	461
03:30			5	9	14	15:30			285	271	556
03:45			17	36 15	45 32 81	15:45			295	1081 261	1008 556 2089
04:00			12	8	20	16:00			331	239	570
04:15			20	15	35	16:15			354	265	619
04:30			20	23	43	16:30			290	271	561
04:45			14	66 22	68 36 134	16:45			368	1343 296	1071 664 2414
05:00			26	28	54	17:00			310	288	598
05:15			30	32	62	17:15			367	255	622
05:30			53	58	111	17:30			300	274	574
05:45			85	194 67	185 152 379	17:45			347	1324 263	1080 610 2404
06:00			99	103	202	18:00			305	298	603
06:15			151	144	295	18:15			288	302	590
06:30			251	274	525	18:30			277	315	592
06:45			288	789 275	796 563 1585	18:45			298	1168 292	1207 590 2375
07:00			289	282	571	19:00			230	207	437
07:15			242	366	608	19:15			192	202	394
07:30			298	305	603	19:30			202	216	418
07:45			264	1093 314	1267 578 2360	19:45			232	856 191	816 423 1672
08:00			369	309	678	20:00			202	162	364
08:15			335	313	648	20:15			181	133	314
08:30			278	259	537	20:30			161	158	319
08:45			280	1262 294	1175 574 2437	20:45			127	671 138	591 265 1262
09:00			232	245	477	21:00			125	94	219
09:15			244	283	527	21:15			102	108	210
09:30			288	275	563	21:30			117	98	215
09:45			274	1038 282	1085 556 2123	21:45			102	446 114	414 216 860
10:00			237	228	465	22:00			86	99	185
10:15			229	218	447	22:15			65	66	131
10:30			215	244	459	22:30			65	64	129
10:45			214	895 260	950 474 1845	22:45			52	268 49	278 101 546
11:00			227	233	460	23:00			46	52	98
11:15			240	239	479	23:15			38	33	71
11:30			239	239	478	23:30			29	31	60
11:45			210	916 249	960 459 1876	23:45			45	158 32	148 77 306
TOTALS				6427	6700 13127	TOTALS				10407	9658 20065
SPLIT %				49.0%	51.0% 39.5%	SPLIT %				51.9%	48.1% 60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,834	16,358	33,192

AM Peak Hour			07:30	07:15	07:30	PM Peak Hour			16:45	18:00	16:45
AM Pk Volume			1266	1294	2507	PM Pk Volume			1345	1207	2458
Pk Hr Factor			0.858	0.884	0.924	Pk Hr Factor			0.914	0.958	0.925
7 - 9 Volume	0	0	2355	2442	4797	4 - 6 Volume	0	0	2667	2151	4818
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:45	16:15	16:45
7 - 9 Pk Volume	0	0	1266	1294	2507	4 - 6 Pk Volume	0	0	1345	1120	2458
Pk Hr Factor	0.000	0.000	0.858	0.884	0.924	Pk Hr Factor	0.000	0.000	0.914	0.946	0.925

Prepared by NDS/ATD

VOLUME

Palos Verdes Dr E S/O Palos Verdes Dr N

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_011

DAILY TOTALS	NB	SB	EB	WB	Total
	6,802	7,450	0	0	14,252

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	1		9				10		12:00	106		109				215	
00:15	1		2				3		12:15	122		113				235	
00:30	3		3				6		12:30	134		149				283	
00:45	3	8	5	19			8	27	12:45	107	469	127	498			234	967
01:00	2		5				7		13:00	120		114				234	
01:15	1		4				5		13:15	119		125				244	
01:30	1		1				2		13:30	126		148				274	
01:45	1	5	2	12			3	17	13:45	92	457	114	501			206	958
02:00	2		1				3		14:00	118		121				239	
02:15	3		1				4		14:15	112		136				248	
02:30	3		0				3		14:30	120		131				251	
02:45	2	10	0	2			2	12	14:45	110	460	175	563			285	1023
03:00	4		1				5		15:00	139		152				291	
03:15	2		0				2		15:15	200		210				410	
03:30	2		4				6		15:30	135		165				300	
03:45	4	12	1	6			5	18	15:45	106	580	157	684			263	1264
04:00	2		5				7		16:00	115		125				240	
04:15	7		3				10		16:15	80		138				218	
04:30	5		0				5		16:30	102		169				271	
04:45	6	20	2	10			8	30	16:45	107	404	156	588			263	992
05:00	15		3				18		17:00	124		154				278	
05:15	20		3				23		17:15	96		194				290	
05:30	39		6				45		17:30	104		190				294	
05:45	49	123	11	23			60	146	17:45	104	428	179	717			283	1145
06:00	37		11				48		18:00	100		163				263	
06:15	51		20				71		18:15	105		195				300	
06:30	95		27				122		18:30	97		170				267	
06:45	94	277	66	124			160	401	18:45	86	388	148	676			234	1064
07:00	134		58				192		19:00	67		102				169	
07:15	131		85				216		19:15	57		119				176	
07:30	226		98				324		19:30	66		92				158	
07:45	177	668	163	404			340	1072	19:45	46	236	101	414			147	650
08:00	218		123				341		20:00	28		94				122	
08:15	192		109				301		20:15	41		71				112	
08:30	132		107				239		20:30	29		80				109	
08:45	147	689	114	453			261	1142	20:45	20	118	78	323			98	441
09:00	138		91				229		21:00	28		81				109	
09:15	106		79				185		21:15	15		70				85	
09:30	120		74				194		21:30	13		48				61	
09:45	108	472	75	319			183	791	21:45	17	73	46	245			63	318
10:00	116		78				194		22:00	7		28				35	
10:15	103		83				186		22:15	15		32				47	
10:30	123		80				203		22:30	6		19				25	
10:45	111	453	94	335			205	788	22:45	6	34	14	93			20	127
11:00	121		98				219		23:00	8		14				22	
11:15	79		88				167		23:15	8		16				24	
11:30	94		109				203		23:30	3		8				11	
11:45	102	396	104	399			206	795	23:45	3	22	4	42			7	64
TOTALS		3133		2106				**5239**	**TOTALS**		3669		5344				**9013**
SPLIT %		59.8%		40.2%				**36.8%**	**SPLIT %**		40.7%		59.3%				**63.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,802	7,450	0	0	14,252

AM Peak Hour	07:30	07:45						**07:30**	**PM Peak Hour**	14:45	17:30						**14:45**
AM Pk Volume	813	502						**1306**	**PM Pk Volume**	584	727						**1286**
Pk Hr Factor	0.899	0.770						**0.957**	**Pk Hr Factor**	0.730	0.932						**0.784**
7 - 9 Volume	1357	857	0	0				**2214**	**4 - 6 Volume**	832	1305	0	0				**2137**
7 - 9 Peak Hour	07:30	07:45						**07:30**	**4 - 6 Peak Hour**	16:45	17:00						**17:00**
7 - 9 Pk Volume	813	502	0	0				**1306**	**4 - 6 Pk Volume**	431	717	0	0				**1145**
Pk Hr Factor	0.899	0.770	0.000	0.000				**0.957**	**Pk Hr Factor**	0.869	0.924	0.000	0.000				**0.974**

Prepared by NDS/ATD

VOLUME

Hawthorne Blvd Bet. Indian Peak Rd & Silver Spur Rd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,558	14,256	30,814

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					13		33		46		12:00					235		176		411	
00:15					14		26		40		12:15					253		203		456	
00:30					10		24		34		12:30					237		228		465	
00:45					11	48	21	104	32	152	12:45					247	972	199	806	446	1778
01:00					10		10		20		13:00					232		212		444	
01:15					3		12		15		13:15					259		214		473	
01:30					7		5		12		13:30					273		266		539	
01:45					9	29	10	37	19	66	13:45					266	1030	269	961	535	1991
02:00					7		6		13		14:00					285		283		568	
02:15					4		15		19		14:15					263		247		510	
02:30					2		3		5		14:30					273		265		538	
02:45					1	14	8	32	9	46	14:45					359	1180	317	1112	676	2292
03:00					3		3		6		15:00					342		294		636	
03:15					10		7		17		15:15					336		303		639	
03:30					6		7		13		15:30					323		280		603	
03:45					17	36	6	23	23	59	15:45					308	1309	288	1165	596	2474
04:00					9		8		17		16:00					290		263		553	
04:15					22		8		30		16:15					270		277		547	
04:30					33		7		40		16:30					268		258		526	
04:45					28	92	7	30	35	122	16:45					279	1107	255	1053	534	2160
05:00					53		8		61		17:00					250		286		536	
05:15					76		20		96		17:15					266		351		617	
05:30					90		24		114		17:30					266		318		584	
05:45					105	324	20	72	125	396	17:45					252	1034	305	1260	557	2294
06:00					103		41		144		18:00					236		304		540	
06:15					143		55		198		18:15					222		284		506	
06:30					268		53		321		18:30					192		275		467	
06:45					325	839	189	338	514	1177	18:45					226	876	228	1091	454	1967
07:00					250		119		369		19:00					164		255		419	
07:15					309		112		421		19:15					175		242		417	
07:30					410		152		562		19:30					139		196		335	
07:45					450	1419	256	639	706	2058	19:45					136	614	228	921	364	1535
08:00					351		182		533		20:00					126		187		313	
08:15					444		193		637		20:15					137		180		317	
08:30					407		202		609		20:30					107		193		300	
08:45					327	1529	179	756	506	2285	20:45					91	461	151	711	242	1172
09:00					288		175		463		21:00					78		167		245	
09:15					296		153		449		21:15					75		143		218	
09:30					310		139		449		21:30					80		145		225	
09:45					278	1172	168	635	446	1807	21:45					66	299	99	554	165	853
10:00					225		169		394		22:00					54		98		152	
10:15					248		159		407		22:15					43		88		131	
10:30					210		150		360		22:30					40		63		103	
10:45					262	945	200	678	462	1623	22:45					32	169	71	320	103	489
11:00					220		186		406		23:00					28		41		69	
11:15					265		184		449		23:15					27		44		71	
11:30					253		207		460		23:30					15		45		60	
11:45					234	972	211	788	445	1760	23:45					18	88	40	170	58	258
TOTALS						7419		4132		11551	TOTALS						9139		10124		19263
SPLIT %						64.2%		35.8%		37.5%	SPLIT %						47.4%		52.6%		62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,558	14,256	30,814

AM Peak Hour			07:30	07:45	07:45	PM Peak Hour			14:45	17:15	14:45
AM Pk Volume			1655	833	2485	PM Pk Volume			1360	1278	2554
Pk Hr Factor			0.919	0.813	0.880	Pk Hr Factor			0.947	0.910	0.945
7 - 9 Volume	0	0	2948	1395	4343	4 - 6 Volume	0	0	2141	2313	4454
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:00	17:00	17:00
7 - 9 Pk Volume	0	0	1655	833	2485	4 - 6 Pk Volume	0	0	1107	1260	2294
Pk Hr Factor	0.000	0.000	0.919	0.813	0.880	Pk Hr Factor	0.000	0.000	0.954	0.897	0.929

Prepared by NDS/ATD

VOLUME

Indian Peak Rd S/O Hawthorne Blvd

Day: Thursday
Date: 9/14/2017

City: Rolling Hills Estates
Project #: CA17_5574_013

DAILY TOTALS	NB	SB	EB	WB	Total
	3,692	3,572	0	0	7,264

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	3		0				3		12:00	77		50				127	
00:15	3		1				4		12:15	61		51				112	
00:30	0		1				1		12:30	59		46				105	
00:45	6	12	0	2			6	14	12:45	60	257	57	204			117	461
01:00	3		2				5		13:00	49		48				97	
01:15	1		0				1		13:15	56		43				99	
01:30	2		0				2		13:30	49		63				112	
01:45	2	8	0	2			2	10	13:45	67	221	59	213			126	434
02:00	3		1				4		14:00	64		51				115	
02:15	0		0				0		14:15	57		55				112	
02:30	1		1				2		14:30	66		56				122	
02:45	0	4	1	3			1	7	14:45	108	295	93	255			201	550
03:00	1		1				2		15:00	91		68				159	
03:15	2		1				3		15:15	92		89				181	
03:30	0		0				0		15:30	87		73				160	
03:45	1	4	1	3			2	7	15:45	74	344	75	305			149	649
04:00	0		0				0		16:00	95		52				147	
04:15	1		3				4		16:15	81		71				152	
04:30	0		6				6		16:30	73		53				126	
04:45	0	1	5	14			5	15	16:45	98	347	67	243			165	590
05:00	2		6				8		17:00	84		55				139	
05:15	1		8				9		17:15	69		53				122	
05:30	1		11				12		17:30	108		65				173	
05:45	0	4	25	50			25	54	17:45	82	343	68	241			150	584
06:00	7		21				28		18:00	75		72				147	
06:15	3		26				29		18:15	81		62				143	
06:30	13		26				39		18:30	73		49				122	
06:45	25	48	42	115			67	163	18:45	46	275	43	226			89	501
07:00	13		38				51		19:00	74		39				113	
07:15	17		60				77		19:15	56		37				93	
07:30	43		70				113		19:30	69		32				101	
07:45	61	134	99	267			160	401	19:45	52	251	31	139			83	390
08:00	36		90				126		20:00	75		17				92	
08:15	51		112				163		20:15	36		22				58	
08:30	34		108				142		20:30	47		17				64	
08:45	50	171	102	412			152	583	20:45	33	191	16	72			49	263
09:00	57		78				135		21:00	34		12				46	
09:15	37		57				94		21:15	40		10				50	
09:30	44		57				101		21:30	39		9				48	
09:45	35	173	82	274			117	447	21:45	20	133	8	39			28	172
10:00	39		65				104		22:00	20		9				29	
10:15	47		58				105		22:15	20		3				23	
10:30	39		57				96		22:30	6		3				9	
10:45	46	171	60	240			106	411	22:45	11	57	5	20			16	77
11:00	54		51				105		23:00	5		3				8	
11:15	52		60				112		23:15	5		4				9	
11:30	59		60				119		23:30	6		2				8	
11:45	55	220	51	222			106	442	23:45	12	28	2	11			14	39
TOTALS		950		1604				**2554**	**TOTALS**		2742		1968				**4710**
SPLIT %		37.2%		62.8%				**35.2%**	**SPLIT %**		58.2%		41.8%				**64.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,692	3,572	0	0	7,264

AM Peak Hour	11:30	08:00				**08:15**	**PM Peak Hour**	14:45	14:45				**14:45**
AM Pk Volume	252	412				**592**	**PM Pk Volume**	378	323				**701**
Pk Hr Factor	0.818	0.920				**0.908**	**Pk Hr Factor**	0.875	0.868				**0.872**
7 - 9 Volume	305	679	0	0		**984**	**4 - 6 Volume**	690	484	0	0		**1174**
7 - 9 Peak Hour	07:30	08:00				**07:45**	**4 - 6 Peak Hour**	16:45	16:15				**16:45**
7 - 9 Pk Volume	191	412	0	0		**591**	**4 - 6 Pk Volume**	359	246	0	0		**599**
Pk Hr Factor	0.783	0.920	0.000	0.000		**0.906**	**Pk Hr Factor**	0.831	0.866	0.000	0.000		**0.866**

Prepared by NDS/ATD

VOLUME

Silver Spur Rd N/O Roxcove Dr

Day: Thursday
Date: 9/14/2017

City: Palos Verdes Peninsula
Project #: CA17_5574_014

DAILY TOTALS	NB	SB	EB	WB	Total
	5,698	6,752	0	0	12,450

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	2		3				5		12:00	89		121				210	
00:15	6		3				9		12:15	81		118				199	
00:30	1		4				5		12:30	108		130				238	
00:45	2	11	0	10			2	21	12:45	97	375	118	487			215	862
01:00	3		4				7		13:00	93		147				240	
01:15	1		2				3		13:15	99		100				199	
01:30	1		0				1		13:30	122		101				223	
01:45	0	5	1	7			1	12	13:45	125	439	124	472			249	911
02:00	2		4				6		14:00	102		173				275	
02:15	0		2				2		14:15	96		141				237	
02:30	0		0				0		14:30	110		125				235	
02:45	6	8	1	7			7	15	14:45	128	436	164	603			292	1039
03:00	1		1				2		15:00	97		162				259	
03:15	2		0				2		15:15	129		161				290	
03:30	1		0				1		15:30	133		160				293	
03:45	1	5	0	1			1	6	15:45	132	491	132	615			264	1106
04:00	4		0				4		16:00	114		165				279	
04:15	7		1				8		16:15	141		129				270	
04:30	5		1				6		16:30	121		122				243	
04:45	9	25	0	2			9	27	16:45	125	501	155	571			280	1072
05:00	7		2				9		17:00	130		166				296	
05:15	11		10				21		17:15	124		144				268	
05:30	14		18				32		17:30	130		113				243	
05:45	39	71	23	53			62	124	17:45	120	504	119	542			239	1046
06:00	17		22				39		18:00	106		115				221	
06:15	29		23				52		18:15	88		100				188	
06:30	51		42				93		18:30	92		86				178	
06:45	66	163	65	152			131	315	18:45	75	361	103	404			178	765
07:00	31		64				95		19:00	71		82				153	
07:15	49		52				101		19:15	86		79				165	
07:30	109		88				197		19:30	56		72				128	
07:45	125	314	129	333			254	647	19:45	70	283	64	297			134	580
08:00	87		88				175		20:00	44		64				108	
08:15	75		94				169		20:15	35		57				92	
08:30	73		115				188		20:30	41		44				85	
08:45	96	331	101	398			197	729	20:45	40	160	50	215			90	375
09:00	81		108				189		21:00	39		38				77	
09:15	93		74				167		21:15	33		30				63	
09:30	65		112				177		21:30	22		21				43	
09:45	61	300	98	392			159	692	21:45	22	116	28	117			50	233
10:00	89		114				203		22:00	20		22				42	
10:15	112		121				233		22:15	18		19				37	
10:30	55		127				182		22:30	9		12				21	
10:45	85	341	118	480			203	821	22:45	13	60	22	75			35	135
11:00	98		124				222		23:00	6		10				16	
11:15	80		119				199		23:15	6		8				14	
11:30	105		134				239		23:30	5		6				11	
11:45	94	377	113	490			207	867	23:45	4	21	5	29			9	50
TOTALS		1951		2325				**4276**	**TOTALS**		3747		4427				**8174**
SPLIT %		45.6%		54.4%				**34.3%**	**SPLIT %**		45.8%		54.2%				**65.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,698	6,752	0	0	12,450

AM Peak Hour	07:30	10:45					**11:00**	**PM Peak Hour**	15:30	14:45					**14:45**
AM Pk Volume	396	495					**867**	**PM Pk Volume**	520	647					**1134**
Pk Hr Factor	0.792	0.924					**0.907**	**Pk Hr Factor**	0.922	0.986					**0.968**
7 - 9 Volume	645	731	0	0			**1376**	**4 - 6 Volume**	1005	1113	0	0			**2118**
7 - 9 Peak Hour	07:30	07:45					**07:30**	**4 - 6 Peak Hour**	16:15	16:30					**16:15**
7 - 9 Pk Volume	396	426	0	0			**795**	**4 - 6 Pk Volume**	517	587	0	0			**1089**
Pk Hr Factor	0.792	0.826	0.000	0.000			**0.782**	**Pk Hr Factor**	0.917	0.884	0.000	0.000			**0.920**

Prepared by NDS/ATD

VOLUME

Crenshaw Blvd N/O Silver Spur Rd

Day: Thursday
Date: 9/14/2017

City: Palos Verdes Peninsula
Project #: CA17_5574_015

DAILY TOTALS	NB	SB	EB	WB	Total
	16,925	13,458	0	0	30,383

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	9		25				34		12:00	244		176				420	
00:15	7		17				24		12:15	252		191				443	
00:30	14		13				27		12:30	293		193				486	
00:45	8	38	10	65			18	103	12:45	243	1032	233	793			476	1825
01:00	7		13				20		13:00	284		174				458	
01:15	6		6				12		13:15	250		223				473	
01:30	7		8				15		13:30	261		229				490	
01:45	5	25	7	34			12	59	13:45	238	1033	243	869			481	1902
02:00	2		8				10		14:00	320		227				547	
02:15	16		3				19		14:15	308		240				548	
02:30	1		4				5		14:30	321		254				575	
02:45	3	22	11	26			14	48	14:45	390	1339	264	985			654	2324
03:00	1		7				8		15:00	378		247				625	
03:15	6		9				15		15:15	377		259				636	
03:30	5		5				10		15:30	342		257				599	
03:45	4	16	15	36			19	52	15:45	279	1376	259	1022			538	2398
04:00	3		14				17		16:00	319		231				550	
04:15	14		18				32		16:15	268		244				512	
04:30	21		11				32		16:30	302		244				546	
04:45	20	58	21	64			41	122	16:45	254	1143	279	998			533	2141
05:00	32		20				52		17:00	317		246				563	
05:15	48		29				77		17:15	278		270				548	
05:30	91		45				136		17:30	275		271				546	
05:45	86	257	63	157			149	414	17:45	240	1110	266	1053			506	2163
06:00	88		74				162		18:00	255		263				518	
06:15	115		97				212		18:15	227		261				488	
06:30	160		133				293		18:30	244		236				480	
06:45	215	578	172	476			387	1054	18:45	200	926	228	988			428	1914
07:00	224		122				346		19:00	220		241				461	
07:15	277		176				453		19:15	181		173				354	
07:30	388		220				608		19:30	157		186				343	
07:45	453	1342	263	781			716	2123	19:45	131	689	184	784			315	1473
08:00	317		233				550		20:00	135		145				280	
08:15	332		194				526		20:15	105		138				243	
08:30	379		192				571		20:30	116		136				252	
08:45	371	1399	213	832			584	2231	20:45	101	457	124	543			225	1000
09:00	300		217				517		21:00	104		136				240	
09:15	318		184				502		21:15	129		118				247	
09:30	306		188				494		21:30	78		89				167	
09:45	279	1203	171	760			450	1963	21:45	68	379	90	433			158	812
10:00	243		155				398		22:00	79		82				161	
10:15	282		191				473		22:15	48		79				127	
10:30	267		155				422		22:30	40		63				103	
10:45	288	1080	175	676			463	1756	22:45	32	199	40	264			72	463
11:00	272		179				451		23:00	50		30				80	
11:15	281		161				442		23:15	17		26				43	
11:30	281		180				461		23:30	10		26				36	
11:45	292	1126	192	712			484	1838	23:45	21	98	25	107			46	205
TOTALS		7144		4619				11763	TOTALS		9781		8839				18620
SPLIT %		60.7%		39.3%				38.7%	SPLIT %		52.5%		47.5%				61.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	16,925	13,458	0	0	30,383

AM Peak Hour	07:30	07:30				07:30	PM Peak Hour	14:45	17:15				14:45
AM Pk Volume	1490	910				2400	PM Pk Volume	1487	1070				2514
Pk Hr Factor	0.822	0.865				0.838	Pk Hr Factor	0.953	0.987				0.961
7 - 9 Volume	2741	1613	0	0		4354	4 - 6 Volume	2253	2051	0	0		4304
7 - 9 Peak Hour	07:30	07:30				07:30	4 - 6 Peak Hour	16:30	16:45				16:30
7 - 9 Pk Volume	1490	910	0	0		2400	4 - 6 Pk Volume	1151	1066	0	0		2190
Pk Hr Factor	0.822	0.865	0.000	0.000		0.838	Pk Hr Factor	0.908	0.955	0.000	0.000		0.972

Prepared by NDS/ATD

VOLUME

Highridge Rd S/O Country Ln

Day: Thursday
Date: 9/14/2017

City: Rancho Palos Verdes
Project #: CA17_5574_016

DAILY TOTALS	NB	SB	EB	WB	Total
	1,627	1,767	0	0	3,394

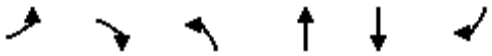
AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		1				1		12:00	21		31				52	
00:15	1		2				3		12:15	22		21				43	
00:30	0		1				1		12:30	26		27				53	
00:45	1	2	3	7			4	9	12:45	25	94	26	105			51	199
01:00	0		0				0		13:00	29		12				41	
01:15	1		0				1		13:15	22		23				45	
01:30	0		1				1		13:30	36		21				57	
01:45	0	1	0	1			0	2	13:45	23	110	22	78			45	188
02:00	0		0				0		14:00	27		20				47	
02:15	0		0				0		14:15	36		17				53	
02:30	0		1				1		14:30	52		48				100	
02:45	0		0	1			0	1	14:45	34	149	100	185			134	334
03:00	0		0				0		15:00	26		32				58	
03:15	0		0				0		15:15	35		39				74	
03:30	0		0				0		15:30	30		23				53	
03:45	0		0				0		15:45	34	125	38	132			72	257
04:00	0		0				0		16:00	23		36				59	
04:15	0		0				0		16:15	30		28				58	
04:30	2		0				2		16:30	23		25				48	
04:45	3	5	0				3	5	16:45	21	97	25	114			46	211
05:00	4		0				4		17:00	23		32				55	
05:15	4		0				4		17:15	29		36				65	
05:30	2		1				3		17:30	35		31				66	
05:45	2	12	1	2			3	14	17:45	34	121	25	124			59	245
06:00	1		5				6		18:00	46		22				68	
06:15	9		3				12		18:15	64		27				91	
06:30	23		12				35		18:30	25		26				51	
06:45	28	61	20	40			48	101	18:45	19	154	24	99			43	253
07:00	14		13				27		19:00	15		22				37	
07:15	44		16				60		19:15	13		11				24	
07:30	73		131				204		19:30	7		12				19	
07:45	41	172	49	209			90	381	19:45	8	43	20	65			28	108
08:00	23		25				48		20:00	16		100				116	
08:15	40		19				59		20:15	9		25				34	
08:30	29		29				58		20:30	12		34				46	
08:45	30	122	21	94			51	216	20:45	6	43	15	174			21	217
09:00	31		21				52		21:00	5		23				28	
09:15	32		18				50		21:15	9		16				25	
09:30	29		12				41		21:30	1		12				13	
09:45	18	110	16	67			34	177	21:45	3	18	10	61			13	79
10:00	18		19				37		22:00	4		13				17	
10:15	24		17				41		22:15	2		5				7	
10:30	27		24				51		22:30	2		4				6	
10:45	17	86	14	74			31	160	22:45	3	11	5	27			8	38
11:00	26		16				42		23:00	1		4				5	
11:15	16		22				38		23:15	1		3				4	
11:30	18		28				46		23:30	2		2				4	
11:45	25	85	31	97			56	182	23:45	2	6	2	11			4	17
TOTALS		656		592				1248	TOTALS		971		1175				2146
SPLIT %		52.6%		47.4%				36.8%	SPLIT %		45.2%		54.8%				63.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,627	1,767	0	0	3,394

AM Peak Hour	07:15	07:30				07:15	PM Peak Hour	17:30	14:30				14:30
AM Pk Volume	181	224				402	PM Pk Volume	179	219				366
Pk Hr Factor	0.620	0.427				0.493	Pk Hr Factor	0.699	0.548				0.683
7 - 9 Volume	294	303	0	0		597	4 - 6 Volume	218	238	0	0		456
7 - 9 Peak Hour	07:15	07:30				07:15	4 - 6 Peak Hour	17:00	16:45				17:00
7 - 9 Pk Volume	181	224	0	0		402	4 - 6 Pk Volume	121	124	0	0		245
Pk Hr Factor	0.620	0.427	0.000	0.000		0.493	Pk Hr Factor	0.864	0.861	0.000	0.000		0.928

APPENDIX B – LEVEL OF SERVICE WORKSHEETS

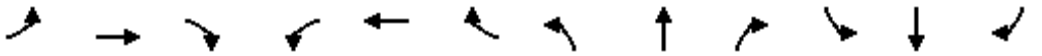
EXISTING BASELINE SCENARIO AM & PM PEAK HOUR LOS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	342	146	100	301	250	243
Future Volume (vph)	342	146	100	301	250	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3278	
Flt Permitted	0.95	1.00	0.41	1.00	1.00	
Satd. Flow (perm)	1770	1583	761	1863	3278	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	438	187	128	386	321	312
RTOR Reduction (vph)	0	133	0	0	161	0
Lane Group Flow (vph)	438	54	128	386	472	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	13.1	13.1	21.8	21.8	21.8	
Effective Green, g (s)	13.1	13.1	21.8	21.8	21.8	
Actuated g/C Ratio	0.29	0.29	0.48	0.48	0.48	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	515	460	368	902	1588	
v/s Ratio Prot	c0.25			c0.21	0.14	
v/s Ratio Perm		0.03	0.17			
v/c Ratio	0.85	0.12	0.35	0.43	0.30	
Uniform Delay, d1	15.0	11.7	7.2	7.5	7.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.7	0.1	0.6	0.3	0.1	
Delay (s)	27.7	11.8	7.8	7.9	7.1	
Level of Service	C	B	A	A	A	
Approach Delay (s)	23.0			7.8	7.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	13.1
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

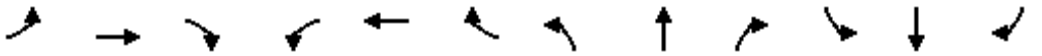
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	347	543	22	225	431	146	29	992	312	155	561	245
Future Volume (veh/h)	347	543	22	225	431	146	29	992	312	155	561	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	381	597	3	247	474	22	32	1090	152	170	616	100
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	719	321	370	680	303	108	1233	550	202	1422	634
Arrive On Green	0.12	0.20	0.20	0.11	0.19	0.19	0.06	0.35	0.35	0.11	0.40	0.40
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	381	597	3	247	474	22	32	1090	152	170	616	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.0	15.0	0.1	6.4	11.6	1.1	1.6	27.0	6.5	8.7	11.7	3.8
Cycle Q Clear(g_c), s	11.0	15.0	0.1	6.4	11.6	1.1	1.6	27.0	6.5	8.7	11.7	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	719	321	370	680	303	108	1233	550	202	1422	634
V/C Ratio(X)	1.82	0.83	0.01	0.67	0.70	0.07	0.30	0.88	0.28	0.84	0.43	0.16
Avail Cap(c_a), veh/h	210	1237	552	444	1275	569	229	1637	730	210	1599	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	35.7	29.8	40.1	35.2	30.9	42.0	28.7	22.0	40.5	20.3	17.9
Incr Delay (d2), s/veh	385.0	1.0	0.0	1.8	0.5	0.0	0.6	4.0	0.1	23.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.2	6.4	0.1	2.8	4.9	0.4	0.7	11.2	2.3	4.9	4.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	426.2	36.7	29.8	41.9	35.7	31.0	42.5	32.7	22.1	63.6	20.4	18.0
LnGrp LOS	F	D	C	D	D	C	D	C	C	E	C	B
Approach Vol, veh/h		981			743			1274			886	
Approach Delay, s/veh		187.9			37.6			31.7			28.4	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	25.4	15.6	37.4	16.0	24.4	10.6	42.3
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	12.0	32.5	11.0	43.0	11.0	33.5	12.0	42.0
Max Q Clear Time (g_c+I1), s	8.4	17.0	10.7	29.0	13.0	13.6	3.6	13.7
Green Ext Time (p_c), s	0.1	1.8	0.0	3.4	0.0	1.5	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	71.5
HCM 6th LOS	E



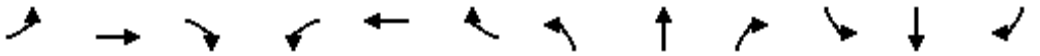
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	432	472	54	401	436	113	114	886	457	36	672	310
Future Volume (veh/h)	432	472	54	401	436	113	114	886	457	36	672	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	514	583	93	599	581	192	163	1042	471	49	791	73
Peak Hour Factor	0.84	0.81	0.58	0.67	0.75	0.59	0.70	0.85	0.97	0.73	0.85	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	575	765	122	650	711	234	168	1266	564	63	1000	446
Arrive On Green	0.17	0.25	0.25	0.19	0.27	0.27	0.09	0.36	0.36	0.04	0.28	0.28
Sat Flow, veh/h	3456	3071	489	3456	2626	866	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	514	337	339	599	393	380	163	1042	471	49	791	73
Grp Sat Flow(s),veh/h/ln	1728	1777	1782	1728	1777	1715	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.5	18.7	18.8	18.1	22.0	22.1	9.7	28.4	28.9	2.9	21.9	2.4
Cycle Q Clear(g_c), s	15.5	18.7	18.8	18.1	22.0	22.1	9.7	28.4	28.9	2.9	21.9	2.4
Prop In Lane	1.00		0.27	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	575	443	444	650	481	464	168	1266	564	63	1000	446
V/C Ratio(X)	0.89	0.76	0.76	0.92	0.82	0.82	0.97	0.82	0.83	0.78	0.79	0.16
Avail Cap(c_a), veh/h	618	619	621	650	585	565	168	1348	601	134	1281	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	37.0	37.0	42.4	36.3	36.3	48.0	31.2	31.3	50.8	35.3	11.8
Incr Delay (d2), s/veh	14.0	4.6	4.7	18.2	8.2	8.7	60.9	4.3	9.9	7.5	3.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	8.5	8.6	9.2	10.4	10.1	7.0	12.1	12.2	1.4	9.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	41.5	41.7	60.6	44.5	45.0	108.9	35.5	41.3	58.4	38.4	12.1
LnGrp LOS	E	D	D	E	D	D	F	D	D	E	D	B
Approach Vol, veh/h		1190			1372			1676			913	
Approach Delay, s/veh		48.4			51.7			44.2			37.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	35.6	21.7	33.3	7.8	43.5	24.0	31.0
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	10.0	* 38	19.0	35.0	8.0	40.3	20.0	37.0
Max Q Clear Time (g_c+I1), s	11.7	23.9	17.5	24.1	4.9	30.9	20.1	20.8
Green Ext Time (p_c), s	0.0	6.0	0.2	4.7	0.0	6.8	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



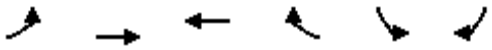
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	956	8	74	921	203	24	42	32	136	51	25
Future Volume (veh/h)	13	956	8	74	921	203	24	42	32	136	51	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	986	3	76	949	209	25	43	33	110	96	26
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	789	668	97	1341	295	124	130	93	191	152	41
Arrive On Green	0.01	0.42	0.42	0.05	0.46	0.46	0.07	0.07	0.07	0.11	0.11	0.11
Sat Flow, veh/h	1781	1870	1585	1781	2896	637	1781	1870	1337	1781	1417	384
Grp Volume(v), veh/h	13	986	3	76	582	576	25	43	33	110	0	122
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1756	1781	1870	1337	1781	0	1801
Q Serve(g_s), s	0.4	24.3	0.1	2.4	15.1	15.1	0.8	1.3	1.4	3.4	0.0	3.7
Cycle Q Clear(g_c), s	0.4	24.3	0.1	2.4	15.1	15.1	0.8	1.3	1.4	3.4	0.0	3.7
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	23	789	668	97	823	813	124	130	93	191	0	193
V/C Ratio(X)	0.56	1.25	0.00	0.78	0.71	0.71	0.20	0.33	0.36	0.58	0.00	0.63
Avail Cap(c_a), veh/h	337	789	668	306	823	813	1017	1068	763	1017	0	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	16.7	9.7	26.9	12.4	12.4	25.3	25.5	25.6	24.5	0.0	24.6
Incr Delay (d2), s/veh	7.6	123.1	0.0	5.1	3.5	3.6	0.3	0.5	0.9	1.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	35.4	0.0	1.1	5.6	5.5	0.3	0.6	0.4	1.4	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	139.8	9.7	32.0	15.9	16.0	25.6	26.1	26.4	25.5	0.0	25.9
LnGrp LOS	D	F	A	C	B	B	C	C	C	C	A	C
Approach Vol, veh/h		1002			1234			101			232	
Approach Delay, s/veh		138.0			16.9			26.1			25.7	
Approach LOS		F			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	30.8		10.7	5.3	33.2		8.5				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	9.9	24.3		32.9	10.9	23.3		32.9				
Max Q Clear Time (g_c+I1), s	4.4	26.3		5.7	2.4	17.1		3.4				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	4.8		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		65.3	
HCM 6th LOS		E	

Notes

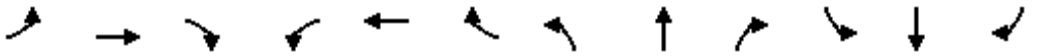
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	1052	879	338	242	117
Future Volume (veh/h)	70	1052	879	338	242	117
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1156	966	347	266	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	251	1354	1190	1008	304	270
Arrive On Green	0.04	0.72	0.64	0.64	0.17	0.17
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	77	1156	966	347	266	16
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	1.2	40.2	35.0	9.2	13.1	0.8
Cycle Q Clear(g_c), s	1.2	40.2	35.0	9.2	13.1	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	251	1354	1190	1008	304	270
V/C Ratio(X)	0.31	0.85	0.81	0.34	0.88	0.06
Avail Cap(c_a), veh/h	263	1354	1190	1008	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	13.6	9.0	12.3	7.6	36.4	31.3
Incr Delay (d2), s/veh	0.1	0.7	5.2	0.8	11.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	11.8	13.7	2.9	6.6	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.7	9.7	17.5	8.4	48.1	31.3
LnGrp LOS	B	A	B	A	D	C
Approach Vol, veh/h		1233	1313		282	
Approach Delay, s/veh		9.9	15.1		47.2	
Approach LOS		A	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.9	62.2		19.8		70.2
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	3.2	37.0		15.1		42.2
Green Ext Time (p_c), s	0.0	9.3		0.2		11.8

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	984	217	164	838	224	355	297	179	98	112	50
Future Volume (veh/h)	44	984	217	164	838	224	355	297	179	98	112	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1004	139	167	855	0	362	303	30	100	114	3
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	1344	599	207	1642		543	393	333	171	179	152
Arrive On Green	0.03	0.38	0.38	0.12	0.46	0.00	0.16	0.21	0.21	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	45	1004	139	167	855	0	362	303	30	100	114	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	1.9	18.1	2.3	6.8	12.6	0.0	7.3	11.3	1.1	2.1	4.3	0.1
Cycle Q Clear(g_c), s	1.9	18.1	2.3	6.8	12.6	0.0	7.3	11.3	1.1	2.1	4.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	1344	599	207	1642		543	393	333	171	179	152
V/C Ratio(X)	0.77	0.75	0.23	0.81	0.52		0.67	0.77	0.09	0.58	0.64	0.02
Avail Cap(c_a), veh/h	433	1622	723	433	1642		840	808	685	840	808	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	20.0	4.3	31.9	14.1	0.0	29.4	27.6	23.6	34.5	32.3	21.3
Incr Delay (d2), s/veh	7.9	1.8	0.3	2.8	0.4	0.0	0.5	4.6	0.2	1.2	5.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.1	1.4	2.9	4.6	0.0	2.8	5.1	0.4	0.9	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	21.8	4.6	34.7	14.5	0.0	29.9	32.1	23.7	35.6	37.5	21.3
LnGrp LOS	D	C	A	C	B		C	C	C	D	D	C
Approach Vol, veh/h		1188			1022	A		695			217	
Approach Delay, s/veh		20.6			17.8			30.6			36.4	
Approach LOS		C			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	33.7	16.1	11.6	6.4	39.9	7.7	20.1
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	18.0	33.8	18.0	* 32	18.0	33.8	18.0	32.0
Max Q Clear Time (g_c+I1), s	8.8	20.1	9.3	6.3	3.9	14.6	4.1	13.3
Green Ext Time (p_c), s	0.1	7.9	0.5	0.7	0.0	7.7	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

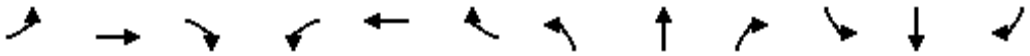
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1697	389	85	785	243	35
Future Volume (veh/h)	1697	389	85	785	243	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1907	437	96	882	273	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2491	556	124	2585	414	190
Arrive On Green	0.60	0.60	0.07	0.73	0.12	0.12
Sat Flow, veh/h	4344	931	1781	3647	3456	1585
Grp Volume(v), veh/h	1545	799	96	882	273	3
Grp Sat Flow(s),veh/h/ln	1702	1703	1781	1777	1728	1585
Q Serve(g_s), s	21.9	23.3	3.5	5.9	4.9	0.1
Cycle Q Clear(g_c), s	21.9	23.3	3.5	5.9	4.9	0.1
Prop In Lane		0.55	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2031	1016	124	2585	414	190
V/C Ratio(X)	0.76	0.79	0.77	0.34	0.66	0.02
Avail Cap(c_a), veh/h	2132	1067	571	3583	2323	1065
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	10.0	29.9	3.2	27.5	25.4
Incr Delay (d2), s/veh	1.6	3.9	3.8	0.1	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.2	1.5	1.0	2.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	14.0	33.8	3.4	29.3	25.4
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	2344			978	276	
Approach Delay, s/veh	12.3			6.4	29.3	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.6	44.1		12.8		52.6
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	21.0	41.0		44.0		66.0
Max Q Clear Time (g_c+I1), s	5.5	25.3		6.9		7.9
Green Ext Time (p_c), s	0.1	13.7		1.0		13.0

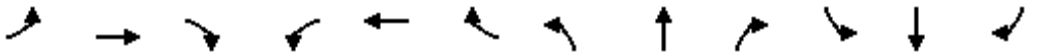
Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	999	262	139	489	122	146	292	94	131	313	131
Future Volume (veh/h)	192	999	262	139	489	122	146	292	94	131	313	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	1175	308	164	575	44	172	344	17	154	368	154
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	1468	385	177	1295	578	204	781	348	185	512	211
Arrive On Green	0.10	0.36	0.36	0.10	0.36	0.36	0.11	0.22	0.22	0.10	0.21	0.21
Sat Flow, veh/h	1781	4028	1056	1781	3554	1585	1781	3554	1585	1781	2454	1011
Grp Volume(v), veh/h	226	993	490	164	575	44	172	344	17	154	265	257
Grp Sat Flow(s),veh/h/ln	1781	1702	1680	1781	1777	1585	1781	1777	1585	1781	1777	1688
Q Serve(g_s), s	10.0	26.4	26.4	9.2	12.4	1.8	9.6	8.4	0.9	8.6	14.0	14.3
Cycle Q Clear(g_c), s	10.0	26.4	26.4	9.2	12.4	1.8	9.6	8.4	0.9	8.6	14.0	14.3
Prop In Lane	1.00		0.63	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	177	1241	613	177	1295	578	204	781	348	185	371	352
V/C Ratio(X)	1.28	0.80	0.80	0.93	0.44	0.08	0.84	0.44	0.05	0.83	0.71	0.73
Avail Cap(c_a), veh/h	177	1315	649	177	1373	613	441	1162	518	265	616	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	28.8	28.8	45.1	24.3	21.0	43.8	34.0	31.1	44.4	37.1	37.3
Incr Delay (d2), s/veh	162.4	3.9	7.5	47.0	0.4	0.1	3.6	0.7	0.1	9.9	4.3	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	10.8	11.3	6.3	5.0	0.7	4.3	3.6	0.3	4.2	6.4	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	207.8	32.6	36.3	92.1	24.7	21.1	47.4	34.7	31.2	54.3	41.5	42.2
LnGrp LOS	F	C	D	F	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1709			783			533			676	
Approach Delay, s/veh		56.8			38.6			38.7			44.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	42.8	16.6	26.6	15.0	42.8	15.5	27.7
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	10.0	39.0	25.0	35.0	10.0	39.0	15.0	33.0
Max Q Clear Time (g_c+I1), s	11.2	28.4	11.6	16.3	12.0	14.4	10.6	10.4
Green Ext Time (p_c), s	0.0	8.4	0.1	4.7	0.0	6.4	0.0	3.5

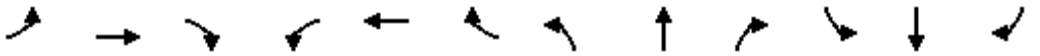
Intersection Summary	
HCM 6th Ctrl Delay	48.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	13	46	2	0	2	38	306	13	40	403	153
Future Volume (veh/h)	132	13	46	2	0	2	38	306	13	40	403	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	17	12	3	0	3	50	403	17	53	530	201
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	454	345	219	440	294	262	402	991	42	635	719	273
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1414	2087	1323	1381	1777	1585	725	1782	75	967	1292	490
Grp Volume(v), veh/h	174	14	15	3	0	3	50	0	420	53	0	731
Grp Sat Flow(s),veh/h/ln	1414	1777	1632	1381	1777	1585	725	0	1857	967	0	1782
Q Serve(g_s), s	3.8	0.2	0.2	0.1	0.0	0.1	1.8	0.0	4.2	1.1	0.0	10.0
Cycle Q Clear(g_c), s	3.8	0.2	0.2	0.3	0.0	0.1	11.8	0.0	4.2	5.3	0.0	10.0
Prop In Lane	1.00		0.81	1.00		1.00	1.00		0.04	1.00		0.27
Lane Grp Cap(c), veh/h	454	294	270	440	294	262	402	0	1033	635	0	992
V/C Ratio(X)	0.38	0.05	0.05	0.01	0.00	0.01	0.12	0.00	0.41	0.08	0.00	0.74
Avail Cap(c_a), veh/h	1007	989	908	980	989	882	402	0	1033	635	0	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.4	11.4	11.5	0.0	11.3	9.8	0.0	4.1	5.6	0.0	5.4
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.0	0.0	0.0	0.6	0.0	1.2	0.3	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.8	0.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	11.4	11.5	11.5	0.0	11.3	10.5	0.0	5.3	5.9	0.0	10.3
LnGrp LOS	B	B	B	B	A	B	B	A	A	A	A	B
Approach Vol, veh/h		203			6			470			784	
Approach Delay, s/veh		13.1			11.4			5.9			10.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		9.9		22.5		9.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		13.8		5.8		12.0		2.3				
Green Ext Time (p_c), s		1.1		0.5		2.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.1									
HCM 6th LOS			A									



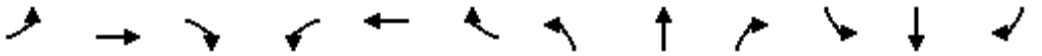
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	3	75	0	36	2	144	138	94	256	0
Future Volume (veh/h)	3	0	3	75	0	36	2	144	138	94	256	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	4	0	4	107	0	15	3	192	184	125	341	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	0	511	274	0	761	353	637	568	405	670	0
Arrive On Green	0.00	0.00	0.32	0.08	0.00	0.48	0.36	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	0	1585	3563	0	1585	1039	1777	1585	1007	1870	0
Grp Volume(v), veh/h	0	0	4	107	0	15	3	192	184	125	341	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1781	0	1585	1039	1777	1585	1007	1870	0
Q Serve(g_s), s	0.0	0.0	0.1	1.6	0.0	0.3	0.1	4.3	4.7	5.7	8.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	1.6	0.0	0.3	8.1	4.3	4.7	10.4	8.0	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	511	274	0	761	353	637	568	405	670	0
V/C Ratio(X)	0.00	0.00	0.01	0.39	0.00	0.02	0.01	0.30	0.32	0.31	0.51	0.00
Avail Cap(c_a), veh/h	0	0	511	1181	0	895	353	637	568	405	670	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	12.8	24.5	0.0	7.6	17.2	12.9	13.0	16.8	14.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.2	1.5	0.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	0.1	0.0	1.6	1.6	1.2	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	12.9	25.4	0.0	7.6	17.3	14.1	14.5	17.2	14.7	0.0
LnGrp LOS	A	A	B	C	A	A	B	B	B	B	B	A
Approach Vol, veh/h		4			122			379			466	
Approach Delay, s/veh		12.9			23.2			14.3			15.4	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	8.8	22.5		24.5	0.0	31.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.0	18.5	18.0		20.0	5.0	31.5				
Max Q Clear Time (g_c+I1), s		10.1	3.6	2.1		12.4	0.0	2.3				
Green Ext Time (p_c), s		1.5	0.2	0.0		1.5	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



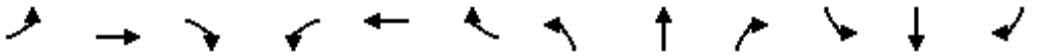
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	2	18	7	4	13	54	292	8	10	424	57
Future Volume (veh/h)	38	2	18	7	4	13	54	292	8	10	424	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	2	22	9	5	16	67	360	10	12	523	70
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	464	414	313	464	414	219	816	23	383	728	97
Arrive On Green	0.18	0.26	0.26	0.18	0.26	0.26	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1781	1777	1585	1781	1777	1585	824	1811	50	1012	1615	216
Grp Volume(v), veh/h	47	2	22	9	5	16	67	0	370	12	0	593
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	824	0	1861	1012	0	1831
Q Serve(g_s), s	2.5	0.1	1.2	0.5	0.2	0.8	8.0	0.0	15.1	0.9	0.0	29.2
Cycle Q Clear(g_c), s	2.5	0.1	1.2	0.5	0.2	0.8	37.2	0.0	15.1	16.0	0.0	29.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.12
Lane Grp Cap(c), veh/h	313	464	414	313	464	414	219	0	838	383	0	825
V/C Ratio(X)	0.15	0.00	0.05	0.03	0.01	0.04	0.31	0.00	0.44	0.03	0.00	0.72
Avail Cap(c_a), veh/h	313	464	414	313	464	414	219	0	838	383	0	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	30.3	30.7	37.9	30.4	30.6	39.9	0.0	20.9	26.4	0.0	24.8
Incr Delay (d2), s/veh	1.0	0.0	0.2	0.2	0.0	0.2	3.6	0.0	1.7	0.2	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.5	0.2	0.1	0.3	1.8	0.0	6.9	0.2	0.0	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	30.3	31.0	38.1	30.4	30.8	43.5	0.0	22.6	26.6	0.0	30.1
LnGrp LOS	D	C	C	D	C	C	D	A	C	C	A	C
Approach Vol, veh/h		71			30			437			605	
Approach Delay, s/veh		36.8			32.9			25.8			30.1	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	34.0		54.0	23.0	34.0		54.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	19.5	28.0		50.0	19.5	* 29		50.0				
Max Q Clear Time (g_c+I1), s	4.5	2.8		31.2	2.5	3.2		39.2				
Green Ext Time (p_c), s	0.1	0.1		4.0	0.0	0.1		2.0				

Intersection Summary			
HCM 6th Ctrl Delay		28.9	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



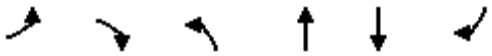
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	388	0	106	0	0	0	234	1112	0	2	633	454
Future Volume (veh/h)	388	0	106	0	0	0	234	1112	0	2	633	454
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	426	0	36	0	0	0	257	1222	0	2	696	499
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	0	481	0	2	0	284	2597	0	4	2039	1138
Arrive On Green	0.14	0.00	0.14	0.00	0.00	0.00	0.16	0.73	0.00	0.00	0.57	0.57
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	426	0	36	0	0	0	257	1222	0	2	696	499
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	14.2	0.0	2.0	0.0	0.0	0.0	17.3	17.2	0.0	0.1	12.7	15.8
Cycle Q Clear(g_c), s	14.2	0.0	2.0	0.0	0.0	0.0	17.3	17.2	0.0	0.1	12.7	15.8
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	513	0	481	0	2	0	284	2597	0	4	2039	1138
V/C Ratio(X)	0.83	0.00	0.07	0.00	0.00	0.00	0.91	0.47	0.00	0.52	0.34	0.44
Avail Cap(c_a), veh/h	876	0	642	0	84	0	438	2597	0	80	2039	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.62	0.62	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	0.0	30.3	0.0	0.0	0.0	50.4	6.7	0.0	60.8	13.8	7.1
Incr Delay (d2), s/veh	3.5	0.0	0.1	0.0	0.0	0.0	7.6	0.4	0.0	35.4	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	0.8	0.0	0.0	0.0	8.1	5.3	0.0	0.1	4.8	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	0.0	30.4	0.0	0.0	0.0	58.0	7.1	0.0	96.2	14.2	8.3
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		462			0			1479			1197	
Approach Delay, s/veh		52.5			0.0			16.0			11.9	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	95.2		22.6	23.4	76.0		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	62.0		30.0	30.0	37.5		5.5				
Max Q Clear Time (g_c+I1), s	2.1	19.2		16.2	19.3	17.8		0.0				
Green Ext Time (p_c), s	0.0	18.7		1.4	0.2	10.1		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		19.8	
HCM 6th LOS		B	

Notes

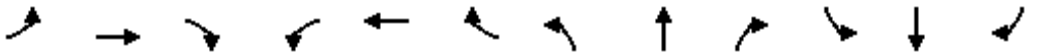
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	242	72	78	319	325	179
Future Volume (vph)	242	72	78	319	325	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3351	
Flt Permitted	0.95	1.00	0.45	1.00	1.00	
Satd. Flow (perm)	1770	1583	843	1863	3351	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	257	77	83	339	346	190
RTOR Reduction (vph)	0	54	0	0	83	0
Lane Group Flow (vph)	257	23	83	339	454	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	13.0	13.0	20.3	20.3	20.3	
Effective Green, g (s)	13.0	13.0	20.3	20.3	20.3	
Actuated g/C Ratio	0.30	0.30	0.47	0.47	0.47	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	530	474	394	871	1567	
v/s Ratio Prot	c0.15			c0.18	0.14	
v/s Ratio Perm		0.01	0.10			
v/c Ratio	0.48	0.05	0.21	0.39	0.29	
Uniform Delay, d1	12.5	10.8	6.8	7.5	7.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.0	0.3	0.3	0.1	
Delay (s)	13.2	10.8	7.1	7.8	7.2	
Level of Service	B	B	A	A	A	
Approach Delay (s)	12.6			7.7	7.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	43.4	Sum of lost time (s)	13.1
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

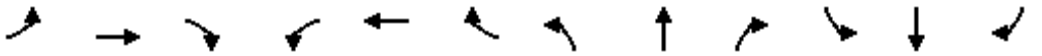
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	490	31	201	409	88	20	720	226	141	967	295
Future Volume (veh/h)	211	490	31	201	409	88	20	720	226	141	967	295
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	521	4	214	435	11	21	766	64	150	1029	132
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	671	299	459	618	275	84	972	433	206	1214	542
Arrive On Green	0.15	0.19	0.19	0.13	0.17	0.17	0.05	0.27	0.27	0.12	0.34	0.34
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	224	521	4	214	435	11	21	766	64	150	1029	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.1	10.4	0.2	4.3	8.6	0.4	0.8	14.8	2.3	6.0	19.9	4.4
Cycle Q Clear(g_c), s	9.1	10.4	0.2	4.3	8.6	0.4	0.8	14.8	2.3	6.0	19.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	671	299	459	618	275	84	972	433	206	1214	542
V/C Ratio(X)	0.85	0.78	0.01	0.47	0.70	0.04	0.25	0.79	0.15	0.73	0.85	0.24
Avail Cap(c_a), veh/h	264	1554	693	558	1601	714	288	2056	917	264	2008	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	28.7	24.5	29.8	28.9	25.6	34.1	25.0	20.4	31.7	22.7	17.6
Incr Delay (d2), s/veh	21.3	0.7	0.0	0.3	0.6	0.0	0.6	0.5	0.1	4.7	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	4.2	0.1	1.7	3.5	0.2	0.4	5.7	0.8	2.7	7.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	29.4	24.5	30.1	29.5	25.6	34.7	25.6	20.5	36.4	23.5	17.7
LnGrp LOS	D	C	C	C	C	C	C	C	C	D	C	B
Approach Vol, veh/h		749			660			851			1311	
Approach Delay, s/veh		36.2			29.6			25.4			24.4	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	20.5	13.6	25.3	16.0	19.4	8.5	30.4
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	12.0	32.5	11.0	43.0	11.0	33.5	12.0	42.0
Max Q Clear Time (g_c+I1), s	6.3	12.4	8.0	16.8	11.1	10.6	2.8	21.9
Green Ext Time (p_c), s	0.1	1.7	0.0	2.4	0.0	1.4	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C



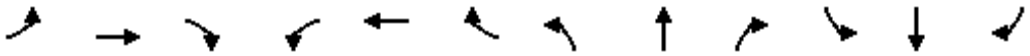
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	444	59	507	404	69	75	626	337	90	786	237
Future Volume (veh/h)	320	444	59	507	404	69	75	626	337	90	786	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	333	462	46	528	421	55	78	652	351	94	819	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	676	67	621	834	108	100	1161	518	120	1127	503
Arrive On Green	0.12	0.21	0.21	0.18	0.26	0.26	0.06	0.33	0.33	0.07	0.32	0.32
Sat Flow, veh/h	3456	3265	324	3456	3163	411	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	333	251	257	528	235	241	78	652	351	94	819	81
Grp Sat Flow(s),veh/h/ln	1728	1777	1812	1728	1777	1796	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.8	10.8	10.9	12.3	9.3	9.5	3.6	12.6	15.9	4.3	17.0	2.0
Cycle Q Clear(g_c), s	7.8	10.8	10.9	12.3	9.3	9.5	3.6	12.6	15.9	4.3	17.0	2.0
Prop In Lane	1.00		0.18	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	425	368	375	621	468	474	100	1161	518	120	1127	503
V/C Ratio(X)	0.78	0.68	0.69	0.85	0.50	0.51	0.78	0.56	0.68	0.78	0.73	0.16
Avail Cap(c_a), veh/h	791	792	808	832	749	757	215	1725	769	172	1639	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	30.4	30.4	33.0	25.9	26.0	38.7	23.1	24.2	38.1	25.1	8.6
Incr Delay (d2), s/veh	1.2	3.1	3.2	5.0	1.2	1.2	4.8	0.6	2.2	8.3	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.7	4.9	5.4	3.9	4.0	1.6	4.9	5.9	2.1	6.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	33.5	33.6	38.0	27.1	27.2	43.4	23.7	26.4	46.4	26.4	8.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	A
Approach Vol, veh/h		841			1004			1081			994	
Approach Delay, s/veh		34.7			32.9			26.0			26.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	32.0	14.2	26.4	9.6	32.8	18.9	21.7
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	10.0	* 38	19.0	35.0	8.0	40.3	20.0	37.0
Max Q Clear Time (g_c+I1), s	5.6	19.0	9.8	11.5	6.3	17.9	14.3	12.9
Green Ext Time (p_c), s	0.0	7.4	0.5	4.0	0.0	7.9	0.6	4.3

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



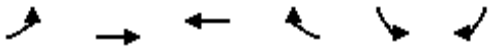
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	760	14	30	858	225	14	37	79	529	50	31
Future Volume (veh/h)	13	760	14	30	858	225	14	37	79	529	50	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.83	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	800	6	32	903	221	15	39	3	622	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	723	613	49	1133	277	89	94	66	775	407	0
Arrive On Green	0.01	0.39	0.39	0.03	0.40	0.40	0.05	0.05	0.05	0.22	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	2831	692	1781	1870	1317	3563	1870	0
Grp Volume(v), veh/h	14	800	6	32	567	557	15	39	3	622	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1746	1781	1870	1317	1781	1870	0
Q Serve(g_s), s	0.5	24.3	0.1	1.1	17.6	17.7	0.5	1.3	0.1	10.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	24.3	0.1	1.1	17.6	17.7	0.5	1.3	0.1	10.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	25	723	613	49	711	699	89	94	66	775	407	0
V/C Ratio(X)	0.57	1.11	0.01	0.66	0.80	0.80	0.17	0.42	0.05	0.80	0.00	0.00
Avail Cap(c_a), veh/h	309	723	613	281	711	699	933	980	690	1866	980	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.8	19.3	11.9	30.3	16.6	16.6	28.6	28.9	28.4	23.3	0.0	0.0
Incr Delay (d2), s/veh	7.5	66.3	0.0	5.6	7.2	7.4	0.3	1.1	0.1	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	22.3	0.0	0.5	7.5	7.5	0.2	0.6	0.0	4.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	85.5	11.9	35.8	23.8	24.0	28.9	30.0	28.5	24.1	0.0	0.0
LnGrp LOS	D	F	B	D	C	C	C	C	C	C	A	A
Approach Vol, veh/h		820			1156			57			622	
Approach Delay, s/veh		84.2			24.2			29.7			24.1	
Approach LOS		F			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	30.8		18.2	5.4	31.6		7.7				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	9.9	24.3		32.9	10.9	23.3		32.9				
Max Q Clear Time (g_c+I1), s	3.1	26.3		12.4	2.5	19.7		3.3				
Green Ext Time (p_c), s	0.0	0.0		1.3	0.0	2.9		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		42.8	
HCM 6th LOS		D	

Notes

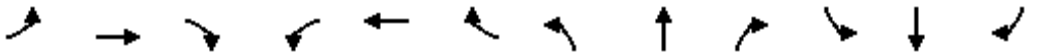
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	1351	1145	21	22	11
Future Volume (veh/h)	7	1351	1145	21	22	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1437	1218	21	23	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	282	1600	1493	1266	69	62
Arrive On Green	0.01	0.86	0.80	0.80	0.04	0.00
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	7	1437	1218	21	23	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	43.1	33.9	0.2	1.1	0.0
Cycle Q Clear(g_c), s	0.1	43.1	33.9	0.2	1.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	282	1600	1493	1266	69	62
V/C Ratio(X)	0.02	0.90	0.82	0.02	0.33	0.00
Avail Cap(c_a), veh/h	349	1600	1493	1266	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.10	0.10	0.74	0.74	1.00	0.00
Uniform Delay (d), s/veh	8.6	4.1	5.2	1.9	42.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	3.8	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	8.3	0.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	5.0	9.0	1.9	43.1	0.0
LnGrp LOS	A	A	A	A	D	A
Approach Vol, veh/h		1444	1239		23	
Approach Delay, s/veh		5.0	8.9		43.1	
Approach LOS		A	A		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.1	76.9		8.0		82.0
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	2.1	35.9		3.1		45.1
Green Ext Time (p_c), s	0.0	11.3		0.0		12.7

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1015	337	121	946	120	165	140	130	203	259	60
Future Volume (veh/h)	55	1015	337	121	946	120	165	140	130	203	259	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	1091	260	130	1017	0	177	151	25	218	278	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	1400	624	165	1578		266	348	295	311	360	305
Arrive On Green	0.04	0.39	0.39	0.09	0.44	0.00	0.08	0.19	0.19	0.09	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	59	1091	260	130	1017	0	177	151	25	218	278	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	2.5	20.6	6.0	5.5	17.1	0.0	3.8	5.5	1.0	4.7	10.8	0.4
Cycle Q Clear(g_c), s	2.5	20.6	6.0	5.5	17.1	0.0	3.8	5.5	1.0	4.7	10.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	1400	624	165	1578		266	348	295	311	360	305
V/C Ratio(X)	0.78	0.78	0.42	0.79	0.64		0.67	0.43	0.08	0.70	0.77	0.04
Avail Cap(c_a), veh/h	418	1566	698	418	1578		811	780	661	811	780	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	20.3	7.2	34.1	16.6	0.0	34.4	27.6	25.8	33.9	29.4	16.5
Incr Delay (d2), s/veh	6.3	2.6	0.6	3.1	1.0	0.0	1.1	1.2	0.2	1.1	4.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.2	2.8	2.4	6.5	0.0	1.5	2.4	0.4	1.9	4.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	22.9	7.8	37.2	17.7	0.0	35.5	28.9	26.0	35.0	34.3	16.6
LnGrp LOS	D	C	A	D	B		D	C	C	C	C	B
Approach Vol, veh/h		1410			1147	A		353			509	
Approach Delay, s/veh		21.0			19.9			32.0			34.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	35.9	10.4	19.3	7.3	39.8	10.9	18.8
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	18.0	33.8	18.0	* 32	18.0	33.8	18.0	32.0
Max Q Clear Time (g_c+I1), s	7.5	22.6	5.8	12.8	4.5	19.1	6.7	7.5
Green Ext Time (p_c), s	0.1	7.6	0.2	2.0	0.0	7.8	0.3	1.1

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

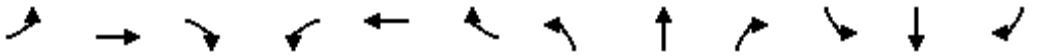
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1015	204	61	1258	537	74
Future Volume (veh/h)	1015	204	61	1258	537	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1057	191	64	1310	559	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2223	401	81	2208	751	344
Arrive On Green	0.51	0.51	0.05	0.62	0.22	0.22
Sat Flow, veh/h	4517	785	1781	3647	3456	1585
Grp Volume(v), veh/h	827	421	64	1310	559	13
Grp Sat Flow(s),veh/h/ln	1702	1729	1781	1777	1728	1585
Q Serve(g_s), s	9.7	9.7	2.2	13.7	9.4	0.4
Cycle Q Clear(g_c), s	9.7	9.7	2.2	13.7	9.4	0.4
Prop In Lane		0.45	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1740	884	81	2208	751	344
V/C Ratio(X)	0.48	0.48	0.79	0.59	0.74	0.04
Avail Cap(c_a), veh/h	2252	1144	604	3784	2453	1125
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.8	9.8	29.3	7.0	22.6	19.1
Incr Delay (d2), s/veh	0.2	0.5	6.2	0.4	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.9	1.0	3.4	3.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	10.3	35.4	7.5	24.1	19.2
LnGrp LOS	B	B	D	A	C	B
Approach Vol, veh/h	1248			1374	572	
Approach Delay, s/veh	10.1			8.8	24.0	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	6.8	36.7		18.5		43.5
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	21.0	41.0		44.0		66.0
Max Q Clear Time (g_c+I1), s	4.2	11.7		11.4		15.7
Green Ext Time (p_c), s	0.0	11.5		2.1		22.8

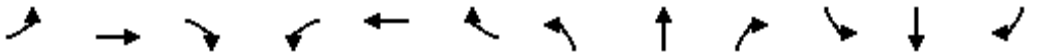
Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	630	200	172	946	49	245	262	188	70	287	188
Future Volume (veh/h)	189	630	200	172	946	49	245	262	188	70	287	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	199	663	168	181	996	11	258	276	42	74	302	103
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1415	353	181	1234	550	291	994	443	95	444	148
Arrive On Green	0.10	0.35	0.35	0.10	0.35	0.35	0.16	0.28	0.28	0.05	0.17	0.17
Sat Flow, veh/h	1781	4075	1017	1781	3554	1585	1781	3554	1585	1781	2615	875
Grp Volume(v), veh/h	199	552	279	181	996	11	258	276	42	74	203	202
Grp Sat Flow(s),veh/h/ln	1781	1702	1687	1781	1777	1585	1781	1777	1585	1781	1777	1713
Q Serve(g_s), s	10.0	12.5	12.7	10.0	25.0	0.4	14.0	6.0	1.9	4.0	10.6	10.9
Cycle Q Clear(g_c), s	10.0	12.5	12.7	10.0	25.0	0.4	14.0	6.0	1.9	4.0	10.6	10.9
Prop In Lane	1.00		0.60	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	181	1182	586	181	1234	550	291	994	443	95	301	291
V/C Ratio(X)	1.10	0.47	0.48	1.00	0.81	0.02	0.89	0.28	0.09	0.78	0.67	0.69
Avail Cap(c_a), veh/h	181	1347	668	181	1407	627	452	1190	531	271	631	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	25.1	25.1	44.3	29.2	21.1	40.3	27.7	26.3	46.0	38.4	38.5
Incr Delay (d2), s/veh	96.4	0.5	1.0	67.2	3.7	0.0	8.7	0.3	0.2	5.0	4.5	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	4.9	5.0	7.7	10.7	0.2	6.7	2.5	0.7	1.9	4.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	25.6	26.2	111.5	32.9	21.2	49.0	28.0	26.4	51.1	42.8	43.5
LnGrp LOS	F	C	C	F	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1030			1188			576			479	
Approach Delay, s/veh		48.0			44.7			37.3			44.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	40.2	21.1	22.2	15.0	40.2	10.3	33.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	10.0	39.0	25.0	35.0	10.0	39.0	15.0	33.0
Max Q Clear Time (g_c+I1), s	12.0	14.7	16.0	12.9	12.0	27.0	6.0	8.0
Green Ext Time (p_c), s	0.0	8.8	0.2	3.8	0.0	7.2	0.0	3.0

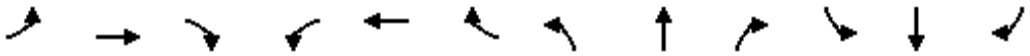
Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	3	103	27	6	34	87	584	4	21	584	136
Future Volume (veh/h)	112	3	103	27	6	34	87	584	4	21	584	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	3	39	30	7	0	96	642	4	23	642	134
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	238	213	384	477	0	412	1072	7	508	866	181
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.00	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1409	1777	1585	1365	3647	0	695	1857	12	785	1501	313
Grp Volume(v), veh/h	123	3	39	30	7	0	96	0	646	23	0	776
Grp Sat Flow(s),veh/h/ln	1409	1777	1585	1365	1777	0	695	0	1868	785	0	1814
Q Serve(g_s), s	2.6	0.0	0.7	0.6	0.1	0.0	3.7	0.0	7.0	0.6	0.0	9.9
Cycle Q Clear(g_c), s	2.6	0.0	0.7	1.3	0.1	0.0	13.5	0.0	7.0	7.6	0.0	9.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	417	238	213	384	477	0	412	0	1078	508	0	1047
V/C Ratio(X)	0.29	0.01	0.18	0.08	0.01	0.00	0.23	0.00	0.60	0.05	0.00	0.74
Avail Cap(c_a), veh/h	1042	1026	915	989	2051	0	412	0	1078	508	0	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.7	12.0	12.6	11.7	0.0	9.9	0.0	4.3	6.7	0.0	4.9
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.1	0.0	0.0	1.3	0.0	2.5	0.2	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.2	0.2	0.0	0.0	0.5	0.0	1.3	0.1	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	11.7	12.4	12.6	11.7	0.0	11.2	0.0	6.7	6.9	0.0	9.6
LnGrp LOS	B	B	B	B	B	A	B	A	A	A	A	A
Approach Vol, veh/h		165			37			742			799	
Approach Delay, s/veh		13.0			12.5			7.3			9.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		8.7		22.5		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		15.5		4.6		11.9		3.3				
Green Ext Time (p_c), s		1.2		0.4		2.8		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									



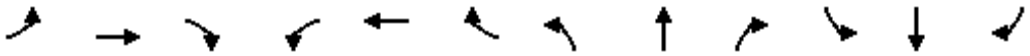
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	112	0	112	0	212	79	97	157	0
Future Volume (veh/h)	0	0	0	112	0	112	0	212	79	97	157	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	141	0	47	0	226	84	103	167	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	599	0	300	0	768	128	900	322	438	665	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.48	0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1218	2530	906	1069	1870	0
Grp Volume(v), veh/h	0	0	0	141	0	47	0	156	154	103	167	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	1218	1777	1659	1069	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.9	0.0	3.5	3.7	4.3	3.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	0.0	0.9	0.0	3.5	3.7	8.0	3.6	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.55	1.00		0.00
Lane Grp Cap(c), veh/h	0	599	0	300	0	768	128	632	590	438	665	0
V/C Ratio(X)	0.00	0.00	0.00	0.47	0.00	0.06	0.00	0.25	0.26	0.24	0.25	0.00
Avail Cap(c_a), veh/h	0	599	0	1172	0	888	128	632	590	438	665	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.6	0.0	7.7	0.0	12.8	12.9	15.7	12.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.9	1.1	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	0.3	0.0	1.3	1.3	0.9	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.7	0.0	7.7	0.0	13.7	13.9	16.0	13.0	0.0
LnGrp LOS	A	A	A	C	A	A	A	B	B	B	B	A
Approach Vol, veh/h		0			188			310			270	
Approach Delay, s/veh		0.0			21.2			13.8			14.1	
Approach LOS					C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	9.2	22.5		24.5	0.0	31.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.0	18.5	18.0		20.0	5.0	31.5				
Max Q Clear Time (g_c+I1), s		5.7	4.1	0.0		10.0	0.0	2.9				
Green Ext Time (p_c), s		1.4	0.3	0.0		0.9	0.0	0.1				

Intersection Summary												
HCM 6th Ctrl Delay			15.7									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.



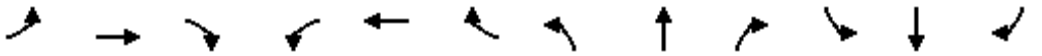
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	496	154	57	406	12	6	9	62	203	11	74
Future Volume (veh/h)	78	496	154	57	406	12	6	9	62	203	11	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	522	101	60	427	-36	6	9	64	214	12	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	1071	206	377	1409	0	424	63	447	440	68	442
Arrive On Green	0.18	0.36	0.36	0.21	0.40	0.00	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	2972	573	1781	3647	0	1307	199	1416	1327	216	1402
Grp Volume(v), veh/h	82	311	312	60	391	0	6	0	73	214	0	90
Grp Sat Flow(s),veh/h/ln	1781	1777	1767	1781	1777	0	1307	0	1615	1327	0	1618
Q Serve(g_s), s	4.4	15.1	15.2	3.1	8.3	0.0	0.4	0.0	3.6	15.3	0.0	4.5
Cycle Q Clear(g_c), s	4.4	15.1	15.2	3.1	8.3	0.0	4.8	0.0	3.6	18.9	0.0	4.5
Prop In Lane	1.00		0.32	1.00		0.00	1.00		0.88	1.00		0.87
Lane Grp Cap(c), veh/h	313	640	637	377	1409	0	424	0	509	440	0	510
V/C Ratio(X)	0.26	0.49	0.49	0.16	0.28	0.00	0.01	0.00	0.14	0.49	0.00	0.18
Avail Cap(c_a), veh/h	313	640	637	377	1409	0	424	0	509	440	0	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	27.5	27.6	35.7	22.7	0.0	29.3	0.0	27.2	34.0	0.0	27.6
Incr Delay (d2), s/veh	2.0	2.6	2.7	0.9	0.5	0.0	0.1	0.0	0.6	3.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.7	6.8	1.4	3.5	0.0	0.1	0.0	1.5	5.4	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	30.2	30.3	36.6	23.2	0.0	29.4	0.0	27.8	37.8	0.0	28.3
LnGrp LOS	D	C	C	D	C	A	C	A	C	D	A	C
Approach Vol, veh/h		705			451			79			304	
Approach Delay, s/veh		31.5			25.0			28.0			35.0	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	49.0		39.0	27.0	45.0		39.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	19.5	43.0		32.0	23.5	* 40		35.0				
Max Q Clear Time (g_c+I1), s	6.4	10.3		20.9	5.1	17.2		6.8				
Green Ext Time (p_c), s	0.1	2.7		0.9	0.1	3.8		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		30.1	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	0	275	0	0	0	155	514	0	4	855	493
Future Volume (veh/h)	534	0	275	0	0	0	155	514	0	4	855	493
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	556	0	286	0	0	-18	161	535	0	4	891	514
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	676	0	468	0	0	71	188	2428	0	7	2067	1223
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.11	0.68	0.00	0.00	0.58	0.58
Sat Flow, veh/h	3563	0	1585	0	0	1585	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	556	0	286	0	0	-18	161	535	0	4	891	514
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	18.3	0.0	18.9	0.0	0.0	0.0	10.8	6.9	0.0	0.3	17.1	13.4
Cycle Q Clear(g_c), s	18.3	0.0	18.9	0.0	0.0	0.0	10.8	6.9	0.0	0.3	17.1	13.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	676	0	468	0	0	0	188	2428	0	7	2067	1223
V/C Ratio(X)	0.82	0.00	0.61	0.00	0.00	0.00	0.86	0.22	0.00	0.54	0.43	0.42
Avail Cap(c_a), veh/h	876	0	557	0	0	0	438	2428	0	80	2067	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.00	0.83	0.00	0.00	0.00	0.73	0.73	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	36.9	0.0	0.0	0.0	53.6	7.2	0.0	60.6	14.3	4.7
Incr Delay (d2), s/veh	4.2	0.0	1.2	0.0	0.0	0.0	3.2	0.2	0.0	20.8	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	7.6	0.0	0.0	0.0	4.9	2.3	0.0	0.2	6.5	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	0.0	38.1	0.0	0.0	0.0	56.8	7.4	0.0	81.4	14.9	5.8
LnGrp LOS	D	A	D	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		842			-18			696			1409	
Approach Delay, s/veh		47.0			0.0			18.8			11.8	
Approach LOS		D			A			B			B	

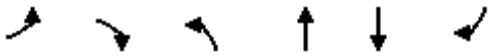
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	89.3		28.2	16.9	77.0		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	62.0		30.0	30.0	37.5		5.5				
Max Q Clear Time (g_c+I1), s	2.3	8.9		20.9	12.8	19.1		0.0				
Green Ext Time (p_c), s	0.0	6.4		2.2	0.1	11.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.6	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

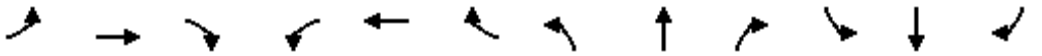
FUTURE BASELINE SCENARIO AM & PM PEAK HOUR LOS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	369	157	108	325	270	262
Future Volume (vph)	369	157	108	325	270	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3278	
Flt Permitted	0.95	1.00	0.35	1.00	1.00	
Satd. Flow (perm)	1770	1583	655	1863	3278	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	473	201	138	417	346	336
RTOR Reduction (vph)	0	127	0	0	183	0
Lane Group Flow (vph)	473	74	138	417	499	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	21.3	21.3	26.3	26.3	26.3	
Effective Green, g (s)	21.3	21.3	26.3	26.3	26.3	
Actuated g/C Ratio	0.37	0.37	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	653	584	298	849	1494	
v/s Ratio Prot	c0.27			c0.22	0.15	
v/s Ratio Perm		0.05	0.21			
v/c Ratio	0.72	0.13	0.46	0.49	0.33	
Uniform Delay, d1	15.7	12.0	10.8	11.0	10.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	0.1	1.1	0.4	0.1	
Delay (s)	19.7	12.1	12.0	11.5	10.2	
Level of Service	B	B	B	B	B	
Approach Delay (s)	17.4			11.6	10.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	57.7	Sum of lost time (s)	13.1
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

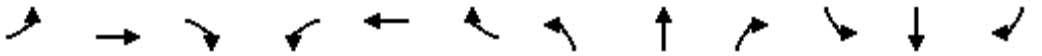
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	374	586	24	243	465	157	31	1070	337	167	606	265
Future Volume (veh/h)	374	586	24	243	465	157	31	1070	337	167	606	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	411	644	4	267	511	25	34	1176	192	184	666	109
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	889	397	330	607	271	105	1230	549	197	1413	630
Arrive On Green	0.17	0.25	0.25	0.10	0.17	0.17	0.06	0.35	0.35	0.11	0.40	0.40
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	411	644	4	267	511	25	34	1176	192	184	666	109
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.0	18.0	0.2	8.2	15.1	1.4	2.0	35.2	9.8	11.1	15.1	4.8
Cycle Q Clear(g_c), s	19.0	18.0	0.2	8.2	15.1	1.4	2.0	35.2	9.8	11.1	15.1	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	889	397	330	607	271	105	1230	549	197	1413	630
V/C Ratio(X)	1.32	0.72	0.01	0.81	0.84	0.09	0.32	0.96	0.35	0.94	0.47	0.17
Avail Cap(c_a), veh/h	311	1095	488	477	964	430	164	1242	554	197	1413	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	37.3	30.6	48.2	43.6	38.0	49.1	34.7	26.4	48.0	24.3	21.2
Incr Delay (d2), s/veh	164.9	1.3	0.0	4.2	2.1	0.1	0.7	15.9	0.1	45.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.5	7.8	0.1	3.7	6.7	0.5	0.9	16.9	3.6	7.3	6.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.8	38.6	30.6	52.4	45.7	38.0	49.7	50.6	26.6	93.6	24.4	21.2
LnGrp LOS	F	D	C	D	D	D	D	D	C	F	C	C
Approach Vol, veh/h		1059			803			1402			959	
Approach Delay, s/veh		105.0			47.7			47.3			37.3	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	33.7	17.0	42.6	24.0	25.1	11.4	48.2
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	15.0	33.5	12.0	38.0	19.0	29.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	10.2	20.0	13.1	37.2	21.0	17.1	4.0	17.1
Green Ext Time (p_c), s	0.2	1.9	0.0	0.5	0.0	1.4	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	59.6
HCM 6th LOS	E



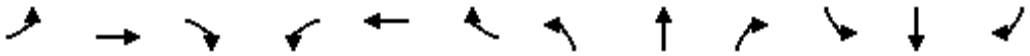
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	509	59	432	471	122	123	955	493	39	725	335
Future Volume (veh/h)	466	509	59	432	471	122	123	955	493	39	725	335
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	555	628	83	645	628	161	176	1124	508	53	853	98
Peak Hour Factor	0.84	0.81	0.58	0.67	0.75	0.59	0.70	0.85	0.97	0.73	0.85	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	607	872	115	562	738	189	180	1318	588	61	1028	458
Arrive On Green	0.18	0.28	0.28	0.16	0.26	0.26	0.10	0.37	0.37	0.03	0.29	0.29
Sat Flow, veh/h	3456	3156	416	3456	2801	717	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	555	353	358	645	398	391	176	1124	508	53	853	98
Grp Sat Flow(s),veh/h/ln	1728	1777	1795	1728	1777	1741	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	18.4	21.0	21.0	19.0	24.8	24.9	11.5	34.0	34.7	3.5	26.2	3.5
Cycle Q Clear(g_c), s	18.4	21.0	21.0	19.0	24.8	24.9	11.5	34.0	34.7	3.5	26.2	3.5
Prop In Lane	1.00		0.23	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	491	496	562	468	459	180	1318	588	61	1028	458
V/C Ratio(X)	0.91	0.72	0.72	1.15	0.85	0.85	0.98	0.85	0.86	0.87	0.83	0.21
Avail Cap(c_a), veh/h	621	563	569	562	533	522	180	1379	615	61	1196	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	38.2	38.2	48.9	40.8	40.8	52.3	33.8	34.0	56.1	38.8	12.7
Incr Delay (d2), s/veh	17.5	4.4	4.4	85.5	12.0	12.5	59.5	5.5	12.3	68.5	4.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	9.6	9.7	14.8	12.2	12.1	8.0	14.8	14.9	2.7	11.6	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	42.5	42.6	134.4	52.9	53.3	111.8	39.3	46.4	124.6	43.7	13.0
LnGrp LOS	E	D	D	F	D	D	F	D	D	F	D	B
Approach Vol, veh/h		1266			1434			1808			1004	
Approach Delay, s/veh		52.3			89.7			48.3			45.0	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	39.5	24.5	35.3	8.0	49.0	23.0	36.8
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	10.0	* 39	21.0	35.0	4.0	45.3	19.0	37.0
Max Q Clear Time (g_c+I1), s	13.5	28.2	20.4	26.9	5.5	36.7	21.0	23.0
Green Ext Time (p_c), s	0.0	5.6	0.1	3.9	0.0	6.6	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	59.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



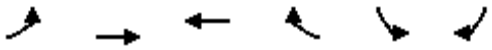
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1031	8	79	994	219	26	45	34	146	55	27
Future Volume (veh/h)	14	1031	8	79	994	219	26	45	34	146	55	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	1063	3	81	1025	217	27	46	2	118	103	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	994	842	103	1681	355	92	96	65	184	146	40
Arrive On Green	0.01	0.53	0.53	0.06	0.58	0.58	0.05	0.05	0.05	0.10	0.10	0.10
Sat Flow, veh/h	1781	1870	1585	1781	2920	616	1781	1870	1260	1781	1416	385
Grp Volume(v), veh/h	14	1063	3	81	623	619	27	46	2	118	0	131
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1759	1781	1870	1260	1781	0	1801
Q Serve(g_s), s	0.6	41.5	0.1	3.5	17.9	18.0	1.1	1.9	0.1	5.0	0.0	5.5
Cycle Q Clear(g_c), s	0.6	41.5	0.1	3.5	17.9	18.0	1.1	1.9	0.1	5.0	0.0	5.5
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	24	994	842	103	1023	1013	92	96	65	184	0	186
V/C Ratio(X)	0.59	1.07	0.00	0.79	0.61	0.61	0.29	0.48	0.03	0.64	0.00	0.70
Avail Cap(c_a), veh/h	114	994	842	103	1023	1013	616	647	436	616	0	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	18.3	8.6	36.3	10.8	10.8	35.7	36.0	35.2	33.6	0.0	33.9
Incr Delay (d2), s/veh	8.2	49.0	0.0	30.4	1.6	1.6	0.7	1.4	0.1	1.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	28.5	0.0	2.3	6.3	6.3	0.5	0.9	0.0	2.2	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	67.3	8.6	66.7	12.4	12.5	36.3	37.4	35.3	35.0	0.0	35.7
LnGrp LOS	D	F	A	E	B	B	D	D	D	D	A	D
Approach Vol, veh/h		1080			1323			75			249	
Approach Delay, s/veh		66.9			15.8			36.9			35.4	
Approach LOS		E			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	48.0		12.6	5.5	51.5		8.5				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.5	41.5		27.0	5.0	41.0		27.0				
Max Q Clear Time (g_c+I1), s	5.5	43.5		7.5	2.6	20.0		3.9				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	14.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		38.4	
HCM 6th LOS		D	

Notes

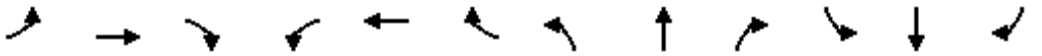
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	1135	949	364	261	127
Future Volume (veh/h)	75	1135	949	364	261	127
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	1247	1043	344	287	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	207	1333	1167	989	324	288
Arrive On Green	0.04	0.71	0.62	0.62	0.18	0.18
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	82	1247	1043	344	287	17
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	1.4	51.7	42.7	9.4	14.1	0.8
Cycle Q Clear(g_c), s	1.4	51.7	42.7	9.4	14.1	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	207	1333	1167	989	324	288
V/C Ratio(X)	0.40	0.94	0.89	0.35	0.89	0.06
Avail Cap(c_a), veh/h	218	1333	1167	989	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.79	0.79	1.00	1.00
Uniform Delay (d), s/veh	18.7	11.2	14.4	8.1	35.9	30.4
Incr Delay (d2), s/veh	0.1	1.7	8.7	0.8	14.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	15.9	17.7	3.0	7.4	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.8	12.8	23.1	8.9	50.4	30.5
LnGrp LOS	B	B	C	A	D	C
Approach Vol, veh/h		1329	1387		304	
Approach Delay, s/veh		13.2	19.6		49.3	
Approach LOS		B	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.0	61.1		20.9		69.1
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	3.4	44.7		16.1		53.7
Green Ext Time (p_c), s	0.0	5.1		0.2		4.9

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1062	234	177	904	242	383	321	193	106	121	54
Future Volume (veh/h)	48	1062	234	177	904	242	383	321	193	106	121	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	1084	156	181	922	0	391	328	44	108	123	7
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1346	600	220	1660		579	412	349	179	184	156
Arrive On Green	0.03	0.38	0.38	0.12	0.47	0.00	0.17	0.22	0.22	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	49	1084	156	181	922	0	391	328	44	108	123	7
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	2.2	22.0	2.9	8.0	15.1	0.0	8.6	13.4	1.8	2.5	5.1	0.3
Cycle Q Clear(g_c), s	2.2	22.0	2.9	8.0	15.1	0.0	8.6	13.4	1.8	2.5	5.1	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	1346	600	220	1660		579	412	349	179	184	156
V/C Ratio(X)	0.79	0.81	0.26	0.82	0.56		0.67	0.80	0.13	0.60	0.67	0.04
Avail Cap(c_a), veh/h	397	1488	664	397	1660		771	742	628	771	742	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	22.4	4.8	34.5	15.5	0.0	31.5	29.7	25.2	37.5	35.1	23.5
Incr Delay (d2), s/veh	7.9	3.3	0.3	2.9	0.5	0.0	0.6	5.0	0.2	1.2	5.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.1	1.7	3.5	5.6	0.0	3.4	6.1	0.7	1.0	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	25.7	5.1	37.4	16.0	0.0	32.1	34.7	25.5	38.7	41.0	23.7
LnGrp LOS	D	C	A	D	B		C	C	C	D	D	C
Approach Vol, veh/h		1289			1103	A		763			238	
Approach Delay, s/veh		24.0			19.5			32.8			39.4	
Approach LOS		C			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	36.3	18.0	12.4	6.8	43.4	8.2	22.3
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	18.0	33.8	18.0	* 32	18.0	33.8	18.0	32.0
Max Q Clear Time (g_c+I1), s	10.0	24.0	10.6	7.1	4.2	17.1	4.5	15.4
Green Ext Time (p_c), s	0.1	6.6	0.5	0.8	0.0	7.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

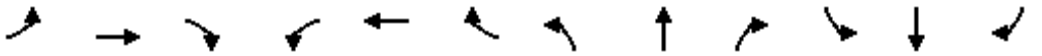
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1831	419	91	847	262	38
Future Volume (veh/h)	1831	419	91	847	262	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2057	447	102	952	294	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2808	589	129	2770	392	180
Arrive On Green	0.66	0.66	0.07	0.78	0.11	0.11
Sat Flow, veh/h	4397	887	1781	3647	3456	1585
Grp Volume(v), veh/h	1641	863	102	952	294	7
Grp Sat Flow(s),veh/h/ln	1702	1711	1781	1777	1728	1585
Q Serve(g_s), s	29.2	31.9	5.3	7.5	7.7	0.4
Cycle Q Clear(g_c), s	29.2	31.9	5.3	7.5	7.7	0.4
Prop In Lane		0.52	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2261	1136	129	2770	392	180
V/C Ratio(X)	0.73	0.76	0.79	0.34	0.75	0.04
Avail Cap(c_a), veh/h	2477	1245	210	3157	999	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.2	10.6	42.6	3.1	40.1	36.9
Incr Delay (d2), s/veh	1.0	2.7	4.0	0.1	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	10.2	2.4	1.6	3.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.2	13.3	46.7	3.2	43.0	37.0
LnGrp LOS	B	B	D	A	D	D
Approach Vol, veh/h	2504			1054	301	
Approach Delay, s/veh	11.9			7.4	42.9	
Approach LOS	B			A	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.8	67.1		15.6		77.8
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	11.0	68.0		27.0		83.0
Max Q Clear Time (g_c+I1), s	7.3	33.9		9.7		9.5
Green Ext Time (p_c), s	0.0	28.1		0.9		15.0

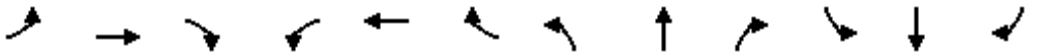
Intersection Summary	
HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	1078	282	150	528	132	157	315	101	141	338	141
Future Volume (veh/h)	207	1078	282	150	528	132	157	315	101	141	338	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	1268	293	176	621	37	185	371	13	166	398	122
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	1551	358	204	1193	532	213	745	332	195	535	162
Arrive On Green	0.15	0.37	0.37	0.11	0.34	0.34	0.12	0.21	0.21	0.11	0.20	0.20
Sat Flow, veh/h	1781	4145	957	1781	3554	1585	1781	3554	1585	1781	2686	814
Grp Volume(v), veh/h	244	1041	520	176	621	37	185	371	13	166	262	258
Grp Sat Flow(s),veh/h/ln	1781	1702	1698	1781	1777	1585	1781	1777	1585	1781	1777	1724
Q Serve(g_s), s	15.0	30.9	30.9	10.9	15.7	1.8	11.4	10.3	0.7	10.2	15.5	15.8
Cycle Q Clear(g_c), s	15.0	30.9	30.9	10.9	15.7	1.8	11.4	10.3	0.7	10.2	15.5	15.8
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	273	1274	635	204	1193	532	213	745	332	195	354	343
V/C Ratio(X)	0.89	0.82	0.82	0.86	0.52	0.07	0.87	0.50	0.04	0.85	0.74	0.75
Avail Cap(c_a), veh/h	382	1338	668	239	1193	532	239	1080	482	255	556	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	31.6	31.6	48.7	29.9	25.3	48.4	39.0	35.2	49.0	42.1	42.2
Incr Delay (d2), s/veh	14.3	4.3	8.3	21.1	0.6	0.1	23.3	0.9	0.1	15.6	5.1	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	12.9	13.5	5.9	6.6	0.7	6.4	4.5	0.3	5.3	7.2	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	35.9	39.9	69.8	30.6	25.4	71.6	39.9	35.3	64.6	47.2	47.8
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1805			834			569			686	
Approach Delay, s/veh		40.4			38.6			50.1			51.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	47.9	18.4	27.8	22.2	43.6	17.2	29.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	15.0	44.0	15.0	35.0	24.0	35.0	16.0	34.0
Max Q Clear Time (g_c+I1), s	12.9	32.9	13.4	17.8	17.0	17.7	12.2	12.3
Green Ext Time (p_c), s	0.0	9.0	0.0	4.5	0.1	5.9	0.0	3.7

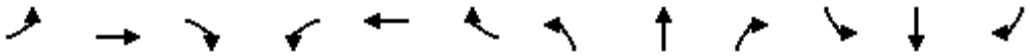
Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	14	50	2	0	2	41	330	14	43	435	165
Future Volume (veh/h)	142	14	50	2	0	2	41	330	14	43	435	165
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	187	18	0	3	0	0	54	434	14	57	572	187
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	607	0	453	607	0	379	996	32	608	746	244
Arrive On Green	0.17	0.17	0.00	0.17	0.00	0.00	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1418	3647	0	1395	3647	0	706	1802	58	942	1350	441
Grp Volume(v), veh/h	187	18	0	3	0	0	54	0	448	57	0	759
Grp Sat Flow(s),veh/h/ln	1418	1777	0	1395	1777	0	706	0	1860	942	0	1791
Q Serve(g_s), s	4.1	0.1	0.0	0.1	0.0	0.0	2.1	0.0	4.6	1.2	0.0	10.7
Cycle Q Clear(g_c), s	4.1	0.1	0.0	0.2	0.0	0.0	12.8	0.0	4.6	5.9	0.0	10.7
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.03	1.00		0.25
Lane Grp Cap(c), veh/h	463	607	0	453	607	0	379	0	1028	608	0	990
V/C Ratio(X)	0.40	0.03	0.00	0.01	0.00	0.00	0.14	0.00	0.44	0.09	0.00	0.77
Avail Cap(c_a), veh/h	1005	1965	0	986	1965	0	379	0	1028	608	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.3	0.0	11.3	0.0	0.0	10.6	0.0	4.3	6.0	0.0	5.6
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.3	0.3	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.9	0.2	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	11.3	0.0	11.3	0.0	0.0	11.4	0.0	5.6	6.3	0.0	11.3
LnGrp LOS	B	B	A	B	A	A	B	A	A	A	A	B
Approach Vol, veh/h		205			3			502			816	
Approach Delay, s/veh		13.3			11.3			6.3			11.0	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		10.1		22.5		10.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		14.8		6.1		12.7		2.2				
Green Ext Time (p_c), s		1.0		0.5		2.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									



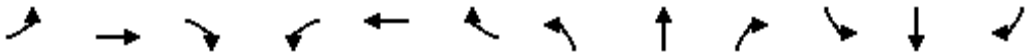
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	3	81	0	39	2	155	148	101	276	0
Future Volume (veh/h)	3	0	3	81	0	39	2	155	148	101	276	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	4	0	0	114	0	13	3	207	29	135	368	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	597	0	275	0	755	339	1141	158	492	680	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.48	0.36	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1014	3136	433	1144	1870	0
Grp Volume(v), veh/h	0	0	0	114	0	13	3	116	120	135	368	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	1014	1777	1792	1144	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	0.2	0.1	2.5	2.6	5.1	8.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.7	0.0	0.2	8.9	2.5	2.6	7.7	8.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.24	1.00		0.00
Lane Grp Cap(c), veh/h	0	597	0	275	0	755	339	646	652	492	680	0
V/C Ratio(X)	0.00	0.00	0.00	0.41	0.00	0.02	0.01	0.18	0.18	0.27	0.54	0.00
Avail Cap(c_a), veh/h	0	597	0	1138	0	872	339	646	652	492	680	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.8	0.0	7.8	17.7	12.2	12.2	14.9	14.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.6	0.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	0.1	0.0	0.9	1.0	1.2	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.8	0.0	7.8	17.8	12.8	12.8	15.2	15.1	0.0
LnGrp LOS	A	A	A	C	A	A	B	B	B	B	B	A
Approach Vol, veh/h		0			127			239			503	
Approach Delay, s/veh		0.0			23.9			12.9			15.1	
Approach LOS					C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	8.9	22.5		25.0	0.0	31.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	18.0	18.0		20.5	5.0	31.0				
Max Q Clear Time (g_c+I1), s		10.9	3.7	0.0		10.8	0.0	2.2				
Green Ext Time (p_c), s		0.8	0.3	0.0		1.8	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



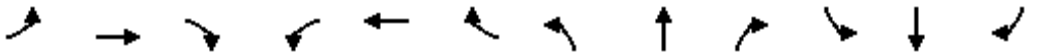
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	458	62	59	315	8	7	4	14	41	2	19
Future Volume (veh/h)	10	458	62	59	315	8	7	4	14	41	2	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	565	65	73	389	8	9	5	2	51	2	3
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1129	130	377	1335	27	520	412	165	518	219	328
Arrive On Green	0.19	0.35	0.35	0.21	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3212	369	1781	3561	73	1411	1271	508	1409	675	1013
Grp Volume(v), veh/h	12	312	318	73	194	203	9	0	7	51	0	5
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1857	1411	0	1779	1409	0	1688
Q Serve(g_s), s	0.6	15.3	15.4	3.7	8.5	8.5	0.5	0.0	0.3	2.8	0.0	0.2
Cycle Q Clear(g_c), s	0.6	15.3	15.4	3.7	8.5	8.5	0.7	0.0	0.3	3.1	0.0	0.2
Prop In Lane	1.00		0.20	1.00		0.04	1.00		0.29	1.00		0.60
Lane Grp Cap(c), veh/h	335	624	634	377	666	696	520	0	577	518	0	547
V/C Ratio(X)	0.04	0.50	0.50	0.19	0.29	0.29	0.02	0.00	0.01	0.10	0.00	0.01
Avail Cap(c_a), veh/h	335	624	634	377	666	696	520	0	577	518	0	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	28.3	28.4	36.0	24.4	24.4	25.7	0.0	25.4	26.5	0.0	25.4
Incr Delay (d2), s/veh	0.2	2.8	2.8	1.1	1.1	1.1	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.9	7.0	1.7	3.7	3.9	0.2	0.0	0.1	1.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	31.2	31.2	37.1	25.5	25.4	25.7	0.0	25.5	26.9	0.0	25.4
LnGrp LOS	D	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		642			470			16			56	
Approach Delay, s/veh		31.3			27.3			25.6			26.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	46.6		40.0	27.0	44.0		40.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	20.9	40.6		36.0	23.5	* 39		36.0				
Max Q Clear Time (g_c+I1), s	2.6	10.5		5.1	5.7	17.4		2.7				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.1	3.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		29.4	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



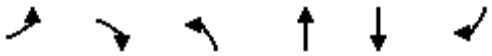
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	0	115	0	0	0	253	1200	0	2	682	489
Future Volume (veh/h)	418	0	115	0	0	0	253	1200	0	2	682	489
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	459	0	17	0	0	0	278	1319	-116	2	749	537
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	545	0	514	0	2	0	305	2565	0	4	1965	1119
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.00	0.17	0.72	0.00	0.00	0.55	0.55
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	459	0	17	0	0	0	278	1203	0	2	749	537
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	15.3	0.0	0.9	0.0	0.0	0.0	18.7	17.4	0.0	0.1	14.6	18.4
Cycle Q Clear(g_c), s	15.3	0.0	0.9	0.0	0.0	0.0	18.7	17.4	0.0	0.1	14.6	18.4
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	545	0	514	0	2	0	305	2565	0	4	1965	1119
V/C Ratio(X)	0.84	0.00	0.03	0.00	0.00	0.00	0.91	0.47	0.00	0.52	0.38	0.48
Avail Cap(c_a), veh/h	876	0	661	0	84	0	438	2565	0	80	1965	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.00	0.87	0.00	0.00	0.00	0.83	0.83	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	0.0	28.2	0.0	0.0	0.0	49.7	7.1	0.0	60.8	15.4	8.0
Incr Delay (d2), s/veh	3.7	0.0	0.0	0.0	0.0	0.0	12.7	0.5	0.0	35.4	0.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.4	0.0	0.0	0.0	9.2	5.5	0.0	0.1	5.6	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	28.2	0.0	0.0	0.0	62.4	7.7	0.0	96.2	16.0	9.4
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		476			0			1481			1288	
Approach Delay, s/veh		53.0			0.0			17.9			13.4	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	94.1		23.7	24.9	73.5		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	62.0		30.0	30.0	37.5		5.5				
Max Q Clear Time (g_c+I1), s	2.1	19.4		17.3	20.7	20.4		0.0				
Green Ext Time (p_c), s	0.0	18.2		1.4	0.2	10.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.3	
HCM 6th LOS		C	

Notes

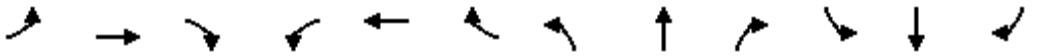
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	261	77	84	344	350	193
Future Volume (vph)	261	77	84	344	350	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3351	
Flt Permitted	0.95	1.00	0.43	1.00	1.00	
Satd. Flow (perm)	1770	1583	810	1863	3351	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	278	82	89	366	372	205
RTOR Reduction (vph)	0	59	0	0	81	0
Lane Group Flow (vph)	278	23	89	366	496	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	12.5	12.5	21.5	21.5	21.5	
Effective Green, g (s)	12.5	12.5	21.5	21.5	21.5	
Actuated g/C Ratio	0.28	0.28	0.49	0.49	0.49	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	501	448	394	908	1633	
v/s Ratio Prot	c0.16			c0.20	0.15	
v/s Ratio Perm		0.01	0.11			
v/c Ratio	0.55	0.05	0.23	0.40	0.30	
Uniform Delay, d1	13.4	11.5	6.5	7.2	6.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.3	0.3	0.1	
Delay (s)	14.8	11.5	6.8	7.5	6.9	
Level of Service	B	B	A	A	A	
Approach Delay (s)	14.0			7.4	6.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	13.1
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	529	33	216	441	95	21	777	244	152	1043	318
Future Volume (veh/h)	227	529	33	216	441	95	21	777	244	152	1043	318
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	563	5	230	469	15	22	827	77	162	1110	156
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	723	322	425	601	268	86	1053	470	198	1277	570
Arrive On Green	0.16	0.20	0.20	0.12	0.17	0.17	0.05	0.30	0.30	0.11	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	241	563	5	230	469	15	22	827	77	162	1110	156
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.7	12.1	0.2	5.1	10.2	0.6	1.0	17.3	2.9	7.2	23.5	5.7
Cycle Q Clear(g_c), s	10.7	12.1	0.2	5.1	10.2	0.6	1.0	17.3	2.9	7.2	23.5	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	723	322	425	601	268	86	1053	470	198	1277	570
V/C Ratio(X)	0.86	0.78	0.02	0.54	0.78	0.06	0.26	0.79	0.16	0.82	0.87	0.27
Avail Cap(c_a), veh/h	397	1561	696	556	1341	598	220	1627	726	286	1759	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	30.5	25.7	33.3	32.1	28.2	37.1	26.1	21.0	35.1	24.1	18.4
Incr Delay (d2), s/veh	9.6	0.7	0.0	0.4	0.8	0.0	0.6	0.6	0.1	7.5	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.0	0.1	2.1	4.3	0.2	0.4	6.7	1.0	3.3	9.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.8	31.2	25.7	33.7	33.0	28.2	37.6	26.7	21.1	42.6	27.0	18.5
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	B
Approach Vol, veh/h		809			714			926			1428	
Approach Delay, s/veh		34.6			33.1			26.5			27.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	22.9	14.0	29.0	17.7	20.2	8.9	34.0
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	13.0	35.5	13.0	37.0	18.0	30.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	7.1	14.1	9.2	19.3	12.7	12.2	3.0	25.5
Green Ext Time (p_c), s	0.1	1.9	0.0	2.5	0.1	1.5	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

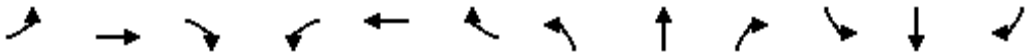
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	478	64	546	436	74	81	676	363	97	848	256
Future Volume (veh/h)	345	478	64	546	436	74	81	676	363	97	848	256
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	359	498	58	569	454	65	84	704	378	101	883	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	440	690	80	650	862	123	107	1174	524	128	1150	513
Arrive On Green	0.13	0.22	0.22	0.19	0.28	0.28	0.06	0.33	0.33	0.07	0.32	0.32
Sat Flow, veh/h	3456	3208	372	3456	3122	445	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	359	275	281	569	257	262	84	704	378	101	883	101
Grp Sat Flow(s),veh/h/ln	1728	1777	1803	1728	1777	1790	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.5	13.5	13.6	15.0	11.5	11.6	4.4	15.5	19.6	5.2	20.9	2.8
Cycle Q Clear(g_c), s	9.5	13.5	13.6	15.0	11.5	11.6	4.4	15.5	19.6	5.2	20.9	2.8
Prop In Lane	1.00		0.21	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	440	382	388	650	490	494	107	1174	524	128	1150	513
V/C Ratio(X)	0.82	0.72	0.72	0.88	0.52	0.53	0.78	0.60	0.72	0.79	0.77	0.20
Avail Cap(c_a), veh/h	702	702	713	812	759	765	133	1454	649	152	1492	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	34.1	34.1	36.9	28.7	28.7	43.4	26.2	27.5	42.8	28.5	9.9
Incr Delay (d2), s/veh	1.8	3.6	3.6	7.7	1.2	1.3	16.5	0.7	3.7	17.2	2.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.0	6.1	6.8	4.9	5.0	2.3	6.2	7.6	2.8	8.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	37.7	37.8	44.6	29.9	30.0	59.9	26.9	31.2	59.9	30.7	10.2
LnGrp LOS	D	D	D	D	C	C	E	C	C	E	C	B
Approach Vol, veh/h		915			1088			1166			1085	
Approach Delay, s/veh		39.2			37.6			30.6			31.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	36.0	15.9	30.3	10.7	36.6	21.6	24.6
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	7.0	* 39	19.0	40.0	8.0	38.3	22.0	37.0
Max Q Clear Time (g_c+I1), s	6.4	22.9	11.5	13.6	7.2	21.6	17.0	15.6
Green Ext Time (p_c), s	0.0	7.4	0.4	4.5	0.0	7.4	0.6	4.6

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



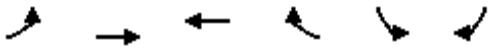
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	819	15	32	926	243	15	40	85	571	54	33
Future Volume (veh/h)	14	819	15	32	926	243	15	40	85	571	54	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	862	5	34	975	240	16	42	2	670	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	900	763	46	1394	342	79	83	54	775	407	0
Arrive On Green	0.01	0.48	0.48	0.03	0.49	0.49	0.04	0.04	0.04	0.22	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	2828	694	1781	1870	1229	3563	1870	0
Grp Volume(v), veh/h	15	862	5	34	612	603	16	42	2	670	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1745	1781	1870	1229	1781	1870	0
Q Serve(g_s), s	0.7	38.3	0.1	1.6	23.0	23.2	0.7	1.9	0.1	15.7	0.0	0.0
Cycle Q Clear(g_c), s	0.7	38.3	0.1	1.6	23.0	23.2	0.7	1.9	0.1	15.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	25	900	763	46	876	861	79	83	54	775	407	0
V/C Ratio(X)	0.60	0.96	0.01	0.74	0.70	0.70	0.20	0.51	0.04	0.86	0.00	0.00
Avail Cap(c_a), veh/h	105	909	770	82	876	861	556	584	384	1113	584	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.4	21.6	11.7	41.8	16.9	17.0	39.9	40.4	39.6	32.6	0.0	0.0
Incr Delay (d2), s/veh	8.4	20.6	0.0	8.3	3.1	3.3	0.5	1.8	0.1	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	20.1	0.0	0.8	9.2	9.1	0.3	0.9	0.0	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	42.1	11.7	50.1	20.1	20.2	40.3	42.2	39.7	36.4	0.0	0.0
LnGrp LOS	D	D	B	D	C	C	D	D	D	D	A	A
Approach Vol, veh/h		882			1249			60			670	
Approach Delay, s/veh		42.1			21.0			41.6			36.4	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	48.1		23.3	5.7	49.1		8.3				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.0	42.0		27.0	5.1	40.9		27.0				
Max Q Clear Time (g_c+I1), s	3.6	40.3		17.7	2.7	25.2		3.9				
Green Ext Time (p_c), s	0.0	1.3		1.1	0.0	11.2		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		31.5	
HCM 6th LOS		C	

Notes

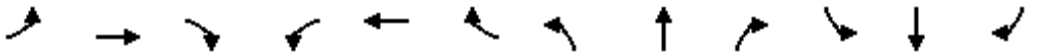
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	1457	1235	22	24	11
Future Volume (veh/h)	7	1457	1235	22	24	11
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1550	1314	22	26	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	220	1593	1487	1260	76	67
Arrive On Green	0.01	0.85	0.79	0.79	0.04	0.00
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	7	1550	1314	22	26	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	64.5	43.6	0.3	1.3	0.0
Cycle Q Clear(g_c), s	0.1	64.5	43.6	0.3	1.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	220	1593	1487	1260	76	67
V/C Ratio(X)	0.03	0.97	0.88	0.02	0.34	0.00
Avail Cap(c_a), veh/h	286	1593	1487	1260	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.74	0.74	1.00	0.00
Uniform Delay (d), s/veh	13.2	5.8	6.4	1.9	41.9	0.0
Incr Delay (d2), s/veh	0.0	7.9	6.1	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	9.0	11.5	0.1	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.2	13.6	12.5	1.9	42.9	0.0
LnGrp LOS	B	B	B	A	D	A
Approach Vol, veh/h		1557	1336		26	
Approach Delay, s/veh		13.6	12.3		42.9	
Approach LOS		B	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.1	76.5		8.3		81.7
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	2.1	45.6		3.3		66.5
Green Ext Time (p_c), s	0.0	4.8		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1094	363	131	1021	130	178	151	140	219	279	65
Future Volume (veh/h)	60	1094	363	131	1021	130	178	151	140	219	279	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	1176	285	141	1098	0	191	162	23	235	300	18
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	1558	695	173	1736		260	344	291	308	360	305
Arrive On Green	0.05	0.44	0.44	0.10	0.49	0.00	0.08	0.18	0.18	0.09	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	65	1176	285	141	1098	0	191	162	23	235	300	18
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.4	26.4	7.9	7.4	21.7	0.0	5.1	7.4	1.1	6.3	14.7	0.7
Cycle Q Clear(g_c), s	3.4	26.4	7.9	7.4	21.7	0.0	5.1	7.4	1.1	6.3	14.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	1558	695	173	1736		260	344	291	308	360	305
V/C Ratio(X)	0.78	0.75	0.41	0.82	0.63		0.73	0.47	0.08	0.76	0.83	0.06
Avail Cap(c_a), veh/h	169	1881	839	281	2105		327	462	392	473	541	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	22.4	8.3	42.1	18.0	0.0	43.0	34.7	32.1	42.3	36.9	21.6
Incr Delay (d2), s/veh	5.7	1.7	0.6	3.7	0.6	0.0	4.3	1.4	0.2	1.5	8.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.7	3.7	3.4	8.4	0.0	2.3	3.3	0.4	2.6	7.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	24.1	8.9	45.7	18.6	0.0	47.3	36.1	32.3	43.8	45.5	21.8
LnGrp LOS	D	C	A	D	B		D	D	C	D	D	C
Approach Vol, veh/h		1526			1239	A		376			553	
Approach Delay, s/veh		22.4			21.7			41.6			44.0	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	47.4	11.7	22.8	8.5	52.1	12.5	22.0
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	15.0	50.3	9.0	* 28	9.0	56.3	13.0	23.5
Max Q Clear Time (g_c+I1), s	9.4	28.4	7.1	16.7	5.4	23.7	8.3	9.4
Green Ext Time (p_c), s	0.1	13.3	0.1	1.6	0.0	13.2	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

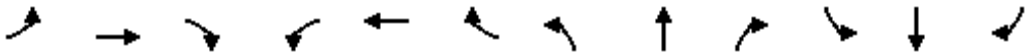
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1094	220	66	1358	579	79
Future Volume (veh/h)	1094	220	66	1358	579	79
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1140	208	69	1415	603	18
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2317	423	88	2270	769	353
Arrive On Green	0.53	0.53	0.05	0.64	0.22	0.22
Sat Flow, veh/h	4509	792	1781	3647	3456	1585
Grp Volume(v), veh/h	894	454	69	1415	603	18
Grp Sat Flow(s),veh/h/ln	1702	1728	1781	1777	1728	1585
Q Serve(g_s), s	12.0	12.0	2.8	17.2	11.9	0.6
Cycle Q Clear(g_c), s	12.0	12.0	2.8	17.2	11.9	0.6
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1817	922	88	2270	769	353
V/C Ratio(X)	0.49	0.49	0.78	0.62	0.78	0.05
Avail Cap(c_a), veh/h	2783	1413	296	3694	1676	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	10.6	33.9	7.8	26.4	22.1
Incr Delay (d2), s/veh	0.2	0.5	5.5	0.5	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.8	1.3	4.7	4.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.9	11.1	39.4	8.3	28.2	22.1
LnGrp LOS	B	B	D	A	C	C
Approach Vol, veh/h	1348			1484	621	
Approach Delay, s/veh	11.0			9.7	28.0	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.6	43.5		21.1		51.1
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	12.0	59.0		35.0		75.0
Max Q Clear Time (g_c+I1), s	4.8	14.0		13.9		19.2
Green Ext Time (p_c), s	0.0	14.7		2.2		26.9

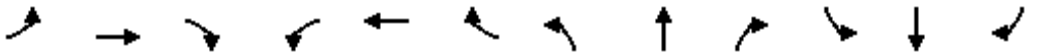
Intersection Summary		
HCM 6th Ctrl Delay		13.5
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	680	215	186	1021	53	265	282	203	75	310	203
Future Volume (veh/h)	204	680	215	186	1021	53	265	282	203	75	310	203
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	215	716	183	196	1075	17	279	297	61	79	326	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	1375	347	224	1166	520	306	1032	460	101	449	161
Arrive On Green	0.14	0.34	0.34	0.13	0.33	0.33	0.17	0.29	0.29	0.06	0.18	0.18
Sat Flow, veh/h	1781	4064	1026	1781	3554	1585	1781	3554	1585	1781	2563	919
Grp Volume(v), veh/h	215	598	301	196	1075	17	279	297	61	79	224	221
Grp Sat Flow(s),veh/h/ln	1781	1702	1686	1781	1777	1585	1781	1777	1585	1781	1777	1705
Q Serve(g_s), s	13.5	16.1	16.3	12.3	33.2	0.8	17.5	7.4	3.2	5.0	13.5	14.0
Cycle Q Clear(g_c), s	13.5	16.1	16.3	12.3	33.2	0.8	17.5	7.4	3.2	5.0	13.5	14.0
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	242	1152	570	224	1166	520	306	1032	460	101	311	299
V/C Ratio(X)	0.89	0.52	0.53	0.87	0.92	0.03	0.91	0.29	0.13	0.79	0.72	0.74
Avail Cap(c_a), veh/h	250	1152	570	282	1187	529	313	1343	599	188	547	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	30.2	30.3	48.8	36.8	26.0	46.3	31.3	29.8	53.0	44.3	44.5
Incr Delay (d2), s/veh	27.8	0.7	1.4	18.5	12.0	0.0	28.6	0.3	0.2	5.0	5.3	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	6.5	6.7	6.5	15.7	0.3	10.1	3.2	1.3	2.3	6.3	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.1	30.9	31.7	67.3	48.8	26.0	74.9	31.5	30.0	58.0	49.6	50.5
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h		1114			1288			637			524	
Approach Delay, s/veh		39.8			51.3			50.4			51.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	44.5	24.5	25.4	20.5	43.3	11.4	38.5
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	18.0	36.0	20.0	35.0	16.0	38.0	12.0	43.0
Max Q Clear Time (g_c+I1), s	14.3	18.3	19.5	16.0	15.5	35.2	7.0	9.4
Green Ext Time (p_c), s	0.1	8.1	0.0	4.0	0.0	2.2	0.0	3.7

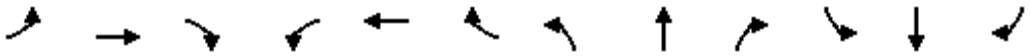
Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	3	111	29	6	37	94	630	4	22	630	146
Future Volume (veh/h)	121	3	111	29	6	37	94	630	4	22	630	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	3	26	32	7	5	103	692	4	24	692	145
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	251	224	404	294	188	364	1063	6	468	858	180
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1402	1777	1585	1381	2080	1328	657	1858	11	749	1500	314
Grp Volume(v), veh/h	133	3	26	32	6	6	103	0	696	24	0	837
Grp Sat Flow(s),veh/h/ln	1402	1777	1585	1381	1777	1631	657	0	1868	749	0	1814
Q Serve(g_s), s	2.8	0.0	0.5	0.7	0.1	0.1	4.6	0.0	8.0	0.7	0.0	11.5
Cycle Q Clear(g_c), s	2.9	0.0	0.5	1.1	0.1	0.1	16.2	0.0	8.0	8.7	0.0	11.5
Prop In Lane	1.00		1.00	1.00		0.81	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	423	251	224	404	251	231	364	0	1070	468	0	1038
V/C Ratio(X)	0.31	0.01	0.12	0.08	0.02	0.03	0.28	0.00	0.65	0.05	0.00	0.81
Avail Cap(c_a), veh/h	1027	1017	907	1000	1017	934	364	0	1070	468	0	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.6	11.8	12.3	11.6	11.6	11.8	0.0	4.6	7.5	0.0	5.3
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.0	0.0	1.9	0.0	3.1	0.2	0.0	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	0.2	0.0	0.0	0.7	0.0	1.6	0.1	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	11.6	12.0	12.3	11.7	11.7	13.7	0.0	7.7	7.7	0.0	12.0
LnGrp LOS	B	B	B	B	B	B	B	A	A	A	A	B
Approach Vol, veh/h		162			44			799			861	
Approach Delay, s/veh		13.1			12.2			8.4			11.9	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		8.9		22.5		8.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		18.2		4.9		13.5		3.1				
Green Ext Time (p_c), s		0.0		0.4		2.4		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									



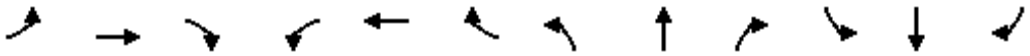
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	121	0	121	0	229	85	105	169	0
Future Volume (veh/h)	0	0	0	121	0	121	0	229	85	105	169	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	156	0	58	0	244	38	112	180	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	598	0	305	0	769	128	1089	167	455	664	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.49	0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1204	3068	470	1097	1870	0
Grp Volume(v), veh/h	0	0	0	156	0	58	0	140	142	112	180	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	1204	1777	1761	1097	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	1.1	0.0	3.1	3.2	4.5	3.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	0.0	1.1	0.0	3.1	3.2	7.7	3.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	0	598	0	305	0	769	128	631	625	455	664	0
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.00	0.08	0.00	0.22	0.23	0.25	0.27	0.00
Avail Cap(c_a), veh/h	0	598	0	1170	0	886	128	631	625	455	664	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.6	0.0	7.7	0.0	12.7	12.7	15.4	13.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.8	0.8	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.0	0.0	0.3	0.0	1.2	1.2	1.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.9	0.0	7.8	0.0	13.5	13.6	15.7	13.2	0.0
LnGrp LOS	A	A	A	C	A	A	A	B	B	B	B	A
Approach Vol, veh/h		0			214			282			292	
Approach Delay, s/veh		0.0			21.0			13.6			14.2	
Approach LOS					C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	9.3	22.5		24.5	0.0	31.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.0	18.5	18.0		20.0	5.0	31.5				
Max Q Clear Time (g_c+I1), s		5.2	4.4	0.0		9.7	0.0	3.1				
Green Ext Time (p_c), s		1.2	0.4	0.0		1.0	0.0	0.1				

Intersection Summary		
HCM 6th Ctrl Delay		15.8
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.



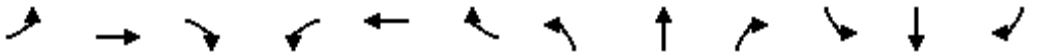
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	535	166	62	438	13	6	9	67	219	11	79
Future Volume (veh/h)	84	535	166	62	438	13	6	9	67	219	11	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	563	119	65	461	-31	6	9	70	231	12	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	1053	222	329	1249	0	467	63	489	472	79	475
Arrive On Green	0.19	0.36	0.36	0.18	0.35	0.00	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	2921	615	1781	3647	0	1314	184	1429	1320	231	1389
Grp Volume(v), veh/h	88	342	340	65	430	0	6	0	79	231	0	84
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1777	0	1314	0	1613	1320	0	1620
Q Serve(g_s), s	4.7	16.9	17.0	3.4	9.9	0.0	0.4	0.0	3.8	16.3	0.0	4.0
Cycle Q Clear(g_c), s	4.7	16.9	17.0	3.4	9.9	0.0	4.3	0.0	3.8	20.0	0.0	4.0
Prop In Lane	1.00		0.35	1.00		0.00	1.00		0.89	1.00		0.86
Lane Grp Cap(c), veh/h	345	640	634	329	1249	0	467	0	552	472	0	555
V/C Ratio(X)	0.26	0.53	0.54	0.20	0.34	0.00	0.01	0.00	0.14	0.49	0.00	0.15
Avail Cap(c_a), veh/h	345	640	634	329	1249	0	467	0	552	472	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	28.1	28.2	38.3	26.6	0.0	26.8	0.0	25.2	32.2	0.0	25.3
Incr Delay (d2), s/veh	1.8	3.2	3.2	1.3	0.8	0.0	0.1	0.0	0.5	3.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.6	7.6	1.6	4.3	0.0	0.1	0.0	1.5	5.6	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	31.3	31.4	39.6	27.3	0.0	26.9	0.0	25.8	35.8	0.0	25.9
LnGrp LOS	D	C	C	D	C	A	C	A	C	D	A	C
Approach Vol, veh/h		770			495			85			315	
Approach Delay, s/veh		32.3			28.9			25.9			33.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	44.0		42.0	24.0	45.0		42.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	21.5	38.0		38.0	20.5	* 40		38.0				
Max Q Clear Time (g_c+I1), s	6.7	11.9		22.0	5.4	19.0		6.3				
Green Ext Time (p_c), s	0.2	2.8		1.1	0.1	4.1		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		31.1	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	576	0	296	0	0	0	167	554	0	4	922	532
Future Volume (veh/h)	576	0	296	0	0	0	167	554	0	4	922	532
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	600	0	137	0	0	0	174	577	-70	4	960	554
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	701	0	490	0	2	0	201	2403	0	7	2017	1211
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.00	0.11	0.68	0.00	0.00	0.57	0.57
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	600	0	137	0	0	0	174	507	0	4	960	554
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	19.8	0.0	8.0	0.0	0.0	0.0	11.7	6.6	0.0	0.3	19.5	15.5
Cycle Q Clear(g_c), s	19.8	0.0	8.0	0.0	0.0	0.0	11.7	6.6	0.0	0.3	19.5	15.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	701	0	490	0	2	0	201	2403	0	7	2017	1211
V/C Ratio(X)	0.86	0.00	0.28	0.00	0.00	0.00	0.87	0.21	0.00	0.54	0.48	0.46
Avail Cap(c_a), veh/h	964	0	607	0	84	0	307	2403	0	80	2017	1211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.00	0.80	0.00	0.00	0.00	0.87	0.87	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	31.8	0.0	0.0	0.0	53.2	7.5	0.0	60.6	15.6	5.2
Incr Delay (d2), s/veh	4.7	0.0	0.2	0.0	0.0	0.0	9.0	0.2	0.0	20.8	0.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	3.1	0.0	0.0	0.0	5.6	2.2	0.0	0.2	7.5	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	0.0	32.1	0.0	0.0	0.0	62.2	7.6	0.0	81.4	16.4	6.5
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		737			0			681			1518	
Approach Delay, s/veh		48.3			0.0			21.6			13.0	
Approach LOS		D						C			B	

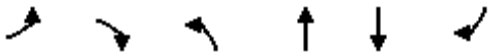
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	88.5		29.0	17.8	75.2		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	59.0		33.0	21.0	43.5		5.5				
Max Q Clear Time (g_c+I1), s	2.3	8.6		21.8	13.7	21.5		0.0				
Green Ext Time (p_c), s	0.0	6.0		2.1	0.1	13.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.8	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

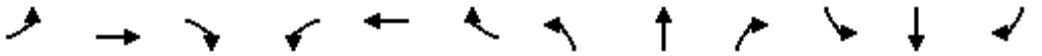
FUTURE BASELINE PLUS LOW-BUILDOUT SCENARIO
AM & PM PEAK HOUR LOS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	366	155	107	322	268	260
Future Volume (vph)	366	155	107	322	268	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3278	
Flt Permitted	0.95	1.00	0.36	1.00	1.00	
Satd. Flow (perm)	1770	1583	662	1863	3278	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	469	199	137	413	344	333
RTOR Reduction (vph)	0	126	0	0	181	0
Lane Group Flow (vph)	469	73	137	413	496	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	21.1	21.1	26.3	26.3	26.3	
Effective Green, g (s)	21.1	21.1	26.3	26.3	26.3	
Actuated g/C Ratio	0.37	0.37	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	649	580	302	852	1499	
v/s Ratio Prot	c0.27			c0.22	0.15	
v/s Ratio Perm		0.05	0.21			
v/c Ratio	0.72	0.13	0.45	0.48	0.33	
Uniform Delay, d1	15.7	12.1	10.7	10.9	10.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	0.1	1.1	0.4	0.1	
Delay (s)	19.7	12.2	11.8	11.3	10.1	
Level of Service	B	B	B	B	B	
Approach Delay (s)	17.4			11.4	10.1	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	13.1
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	371	581	23	241	461	155	30	1062	334	165	601	263
Future Volume (veh/h)	371	581	23	241	461	155	30	1062	334	165	601	263
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	408	638	3	265	507	22	33	1167	189	181	660	107
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	890	397	328	604	269	104	1227	547	197	1414	631
Arrive On Green	0.18	0.25	0.25	0.10	0.17	0.17	0.06	0.35	0.35	0.11	0.40	0.40
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	408	638	3	265	507	22	33	1167	189	181	660	107
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.0	17.8	0.2	8.1	15.0	1.3	1.9	34.7	9.6	10.9	14.9	4.7
Cycle Q Clear(g_c), s	19.0	17.8	0.2	8.1	15.0	1.3	1.9	34.7	9.6	10.9	14.9	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	890	397	328	604	269	104	1227	547	197	1414	631
V/C Ratio(X)	1.31	0.72	0.01	0.81	0.84	0.08	0.32	0.95	0.35	0.92	0.47	0.17
Avail Cap(c_a), veh/h	313	1099	490	479	968	432	165	1247	556	197	1414	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	37.1	30.5	48.0	43.5	37.8	48.9	34.6	26.4	47.6	24.1	21.0
Incr Delay (d2), s/veh	158.7	1.2	0.0	3.9	1.9	0.0	0.6	15.0	0.1	40.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	7.7	0.1	3.6	6.6	0.5	0.9	16.6	3.5	6.9	5.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.3	38.2	30.5	51.9	45.4	37.9	49.6	49.5	26.5	88.4	24.2	21.1
LnGrp LOS	F	D	C	D	D	D	D	D	C	F	C	C
Approach Vol, veh/h		1049			794			1389			948	
Approach Delay, s/veh		102.4			47.4			46.4			36.1	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	33.6	17.0	42.4	24.0	24.9	11.3	48.1
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	15.0	33.5	12.0	38.0	19.0	29.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	10.1	19.8	12.9	36.7	21.0	17.0	3.9	16.9
Green Ext Time (p_c), s	0.2	1.9	0.0	0.7	0.0	1.4	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	58.3
HCM 6th LOS	E

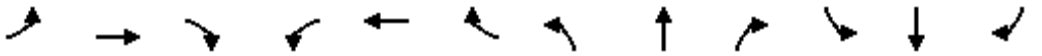
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	462	505	58	429	467	121	122	948	489	38	719	332
Future Volume (veh/h)	462	505	58	429	467	121	122	948	489	38	719	332
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	550	623	81	640	623	159	174	1115	504	52	846	95
Peak Hour Factor	0.84	0.81	0.58	0.67	0.75	0.59	0.70	0.85	0.97	0.73	0.85	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	604	865	112	566	736	188	183	1319	588	61	1025	457
Arrive On Green	0.17	0.27	0.27	0.16	0.26	0.26	0.10	0.37	0.37	0.03	0.29	0.29
Sat Flow, veh/h	3456	3163	411	3456	2804	714	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	550	350	354	640	394	388	174	1115	504	52	846	95
Grp Sat Flow(s),veh/h/ln	1728	1777	1796	1728	1777	1742	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	18.1	20.6	20.7	19.0	24.4	24.5	11.3	33.3	34.0	3.4	25.8	3.3
Cycle Q Clear(g_c), s	18.1	20.6	20.7	19.0	24.4	24.5	11.3	33.3	34.0	3.4	25.8	3.3
Prop In Lane	1.00		0.23	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	604	486	491	566	467	457	183	1319	588	61	1025	457
V/C Ratio(X)	0.91	0.72	0.72	1.13	0.85	0.85	0.95	0.85	0.86	0.85	0.83	0.21
Avail Cap(c_a), veh/h	626	567	573	566	536	526	183	1389	619	61	1205	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	38.1	38.1	48.5	40.5	40.5	51.7	33.4	33.6	55.7	38.5	12.7
Incr Delay (d2), s/veh	16.7	4.3	4.3	78.9	11.5	11.9	52.1	5.1	11.5	61.2	4.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	9.4	9.6	14.3	11.9	11.8	7.5	14.5	14.5	2.5	11.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	42.4	42.4	127.4	52.0	52.4	103.9	38.5	45.1	116.9	43.1	13.0
LnGrp LOS	E	D	D	F	D	D	F	D	D	F	D	B
Approach Vol, veh/h		1254			1422			1793			993	
Approach Delay, s/veh		51.7			86.0			46.7			44.1	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	39.1	24.3	34.9	8.0	48.7	23.0	36.2
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	10.0	* 39	21.0	35.0	4.0	45.3	19.0	37.0
Max Q Clear Time (g_c+I1), s	13.3	27.8	20.1	26.5	5.4	36.0	21.0	22.7
Green Ext Time (p_c), s	0.0	5.7	0.1	4.0	0.0	7.0	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay	57.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



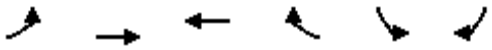
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1023	7	78	987	217	25	44	33	144	54	26
Future Volume (veh/h)	13	1023	7	78	987	217	25	44	33	144	54	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.80	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	1055	2	80	1018	215	26	45	1	116	101	27
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	997	845	103	1689	356	90	95	64	181	144	39
Arrive On Green	0.01	0.53	0.53	0.06	0.58	0.58	0.05	0.05	0.05	0.10	0.10	0.10
Sat Flow, veh/h	1781	1870	1585	1781	2921	615	1781	1870	1261	1781	1422	380
Grp Volume(v), veh/h	13	1055	2	80	618	615	26	45	1	116	0	128
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1760	1781	1870	1261	1781	0	1802
Q Serve(g_s), s	0.6	41.5	0.0	3.4	17.5	17.6	1.1	1.8	0.1	4.9	0.0	5.3
Cycle Q Clear(g_c), s	0.6	41.5	0.0	3.4	17.5	17.6	1.1	1.8	0.1	4.9	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	22	997	845	103	1027	1017	90	95	64	181	0	183
V/C Ratio(X)	0.58	1.06	0.00	0.78	0.60	0.60	0.29	0.47	0.02	0.64	0.00	0.70
Avail Cap(c_a), veh/h	114	997	845	103	1027	1017	618	649	437	618	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	18.2	8.5	36.2	10.6	10.6	35.6	35.9	35.1	33.6	0.0	33.8
Incr Delay (d2), s/veh	8.5	45.1	0.0	28.4	1.5	1.5	0.6	1.4	0.0	1.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	27.4	0.0	2.3	6.1	6.1	0.5	0.9	0.0	2.2	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	63.3	8.5	64.6	12.1	12.2	36.2	37.3	35.1	35.0	0.0	35.6
LnGrp LOS	D	F	A	E	B	B	D	D	D	D	A	D
Approach Vol, veh/h		1070			1313			72			244	
Approach Delay, s/veh		63.0			15.3			36.9			35.3	
Approach LOS		E			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	48.0		12.4	5.5	51.5		8.4				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.5	41.5		27.0	5.0	41.0		27.0				
Max Q Clear Time (g_c+I1), s	5.4	43.5		7.3	2.6	19.6		3.8				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	14.3		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		36.6	
HCM 6th LOS		D	

Notes

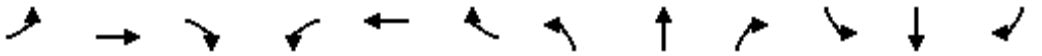
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	74	1127	942	361	259	126
Future Volume (veh/h)	74	1127	942	361	259	126
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	1238	1035	341	285	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	212	1335	1169	991	322	287
Arrive On Green	0.04	0.71	0.63	0.63	0.18	0.18
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	81	1238	1035	341	285	15
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	1.3	50.4	41.8	9.2	14.0	0.7
Cycle Q Clear(g_c), s	1.3	50.4	41.8	9.2	14.0	0.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	212	1335	1169	991	322	287
V/C Ratio(X)	0.38	0.93	0.89	0.34	0.89	0.05
Avail Cap(c_a), veh/h	222	1335	1169	991	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	18.1	10.9	14.2	8.1	36.0	30.5
Incr Delay (d2), s/veh	0.1	1.5	8.3	0.8	14.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	15.4	17.2	2.9	7.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.2	12.4	22.4	8.8	50.2	30.5
LnGrp LOS	B	B	C	A	D	C
Approach Vol, veh/h		1319	1376		300	
Approach Delay, s/veh		12.7	19.1		49.2	
Approach LOS		B	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.0	61.3		20.8		69.2
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	3.3	43.8		16.0		52.4
Green Ext Time (p_c), s	0.0	5.6		0.2		5.9

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	1054	232	175	897	240	380	318	191	105	120	53
Future Volume (veh/h)	47	1054	232	175	897	240	380	318	191	105	120	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	1076	154	179	915	0	388	324	42	107	122	6
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	1348	601	218	1662		573	409	347	178	183	155
Arrive On Green	0.03	0.38	0.38	0.12	0.47	0.00	0.17	0.22	0.22	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	48	1076	154	179	915	0	388	324	42	107	122	6
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	2.1	21.5	2.8	7.8	14.7	0.0	8.4	13.1	1.7	2.4	5.0	0.2
Cycle Q Clear(g_c), s	2.1	21.5	2.8	7.8	14.7	0.0	8.4	13.1	1.7	2.4	5.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	1348	601	218	1662		573	409	347	178	183	155
V/C Ratio(X)	0.79	0.80	0.26	0.82	0.55		0.68	0.79	0.12	0.60	0.67	0.04
Avail Cap(c_a), veh/h	402	1504	671	402	1662		779	749	635	779	749	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	22.1	4.7	34.2	15.2	0.0	31.3	29.5	25.0	37.1	34.7	23.2
Incr Delay (d2), s/veh	8.1	3.1	0.3	2.9	0.5	0.0	0.5	4.9	0.2	1.2	5.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.8	1.7	3.4	5.5	0.0	3.3	5.9	0.6	1.0	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	25.2	5.0	37.1	15.7	0.0	31.8	34.4	25.3	38.3	40.5	23.4
LnGrp LOS	D	C	A	D	B		C	C	C	D	D	C
Approach Vol, veh/h		1278			1094	A		754			235	
Approach Delay, s/veh		23.5			19.2			32.6			39.1	
Approach LOS		C			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	36.0	17.7	12.3	6.7	43.0	8.1	22.0
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	18.0	33.8	18.0	* 32	18.0	33.8	18.0	32.0
Max Q Clear Time (g_c+I1), s	9.8	23.5	10.4	7.0	4.1	16.7	4.4	15.1
Green Ext Time (p_c), s	0.1	6.8	0.5	0.8	0.0	7.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

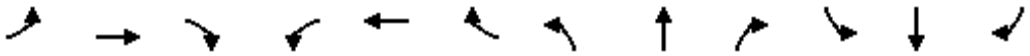
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1818	416	90	841	260	37
Future Volume (veh/h)	1818	416	90	841	260	37
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2043	443	101	945	292	6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2809	588	128	2769	391	179
Arrive On Green	0.66	0.66	0.07	0.78	0.11	0.11
Sat Flow, veh/h	4397	886	1781	3647	3456	1585
Grp Volume(v), veh/h	1630	856	101	945	292	6
Grp Sat Flow(s),veh/h/ln	1702	1711	1781	1777	1728	1585
Q Serve(g_s), s	28.6	31.2	5.2	7.4	7.6	0.3
Cycle Q Clear(g_c), s	28.6	31.2	5.2	7.4	7.6	0.3
Prop In Lane		0.52	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2261	1136	128	2769	391	179
V/C Ratio(X)	0.72	0.75	0.79	0.34	0.75	0.03
Avail Cap(c_a), veh/h	2494	1253	211	3178	1005	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	10.5	42.4	3.1	39.9	36.6
Incr Delay (d2), s/veh	1.0	2.5	4.0	0.1	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	9.9	2.3	1.5	3.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	13.0	46.4	3.2	42.7	36.7
LnGrp LOS	B	B	D	A	D	D
Approach Vol, veh/h	2486			1046	298	
Approach Delay, s/veh	11.7			7.4	42.6	
Approach LOS	B			A	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.7	66.7		15.5		77.3
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	11.0	68.0		27.0		83.0
Max Q Clear Time (g_c+I1), s	7.2	33.2		9.6		9.4
Green Ext Time (p_c), s	0.0	28.5		0.9		14.9

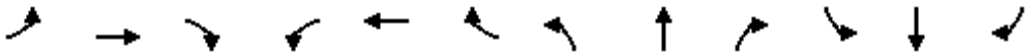
Intersection Summary	
HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1070	280	148	524	131	155	312	100	140	335	140
Future Volume (veh/h)	205	1070	280	148	524	131	155	312	100	140	335	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	1259	290	174	616	36	182	367	12	165	394	121
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	1558	359	203	1200	535	211	738	329	194	533	162
Arrive On Green	0.15	0.38	0.38	0.11	0.34	0.34	0.12	0.21	0.21	0.11	0.20	0.20
Sat Flow, veh/h	1781	4147	955	1781	3554	1585	1781	3554	1585	1781	2685	815
Grp Volume(v), veh/h	241	1033	516	174	616	36	182	367	12	165	259	256
Grp Sat Flow(s),veh/h/ln	1781	1702	1698	1781	1777	1585	1781	1777	1585	1781	1777	1724
Q Serve(g_s), s	14.7	30.1	30.2	10.6	15.4	1.7	11.1	10.1	0.7	10.1	15.2	15.5
Cycle Q Clear(g_c), s	14.7	30.1	30.2	10.6	15.4	1.7	11.1	10.1	0.7	10.1	15.2	15.5
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	270	1279	638	203	1200	535	211	738	329	194	352	342
V/C Ratio(X)	0.89	0.81	0.81	0.86	0.51	0.07	0.86	0.50	0.04	0.85	0.74	0.75
Avail Cap(c_a), veh/h	386	1352	674	241	1200	535	241	1090	486	257	561	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	31.0	31.0	48.2	29.4	24.9	48.0	38.8	35.0	48.5	41.7	41.8
Incr Delay (d2), s/veh	13.3	4.0	7.7	20.0	0.6	0.1	21.9	0.9	0.1	14.8	5.1	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	12.5	13.1	5.7	6.4	0.6	6.2	4.4	0.3	5.2	7.0	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	35.0	38.7	68.2	30.0	25.0	69.9	39.7	35.1	63.3	46.7	47.4
LnGrp LOS	E	C	D	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1790			826			561			680	
Approach Delay, s/veh		39.3			37.8			49.4			51.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	47.6	18.1	27.5	21.8	43.4	17.1	28.5
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	15.0	44.0	15.0	35.0	24.0	35.0	16.0	34.0
Max Q Clear Time (g_c+I1), s	12.6	32.2	13.1	17.5	16.7	17.4	12.1	12.1
Green Ext Time (p_c), s	0.0	9.5	0.0	4.5	0.1	5.9	0.0	3.7

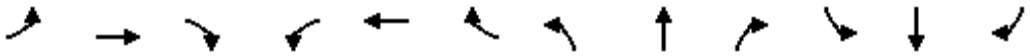
Intersection Summary	
HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	13	49	1	0	1	40	327	13	42	431	163
Future Volume (veh/h)	141	13	49	1	0	1	40	327	13	42	431	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	186	17	-2	1	0	-2	53	430	13	55	567	184
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	520	0	427	260	634	411	1028	31	639	770	250
Arrive On Green	0.15	0.15	0.00	0.15	0.00	0.00	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1781	3647	0	1398	3647	0	712	1806	55	947	1352	439
Grp Volume(v), veh/h	186	15	0	1	-2	-2	53	0	443	55	0	751
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1398	1777	1585	712	0	1861	947	0	1791
Q Serve(g_s), s	3.1	0.1	0.0	0.0	0.0	0.0	1.9	0.0	4.3	1.1	0.0	9.8
Cycle Q Clear(g_c), s	3.1	0.1	0.0	0.1	0.0	0.0	11.7	0.0	4.3	5.4	0.0	9.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.03	1.00		0.25
Lane Grp Cap(c), veh/h	488	520	0	427	260	0	411	0	1059	639	0	1019
V/C Ratio(X)	0.38	0.03	0.00	0.00	-0.01	0.00	0.13	0.00	0.42	0.09	0.00	0.74
Avail Cap(c_a), veh/h	1241	2022	0	1018	1011	0	411	0	1059	639	0	1019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.6	0.0	11.6	0.0	0.0	9.4	0.0	3.9	5.4	0.0	5.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.2	0.3	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.8	0.2	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	11.6	0.0	11.6	0.0	0.0	10.1	0.0	5.1	5.6	0.0	9.8
LnGrp LOS	B	B	A	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		201			-3			496			806	
Approach Delay, s/veh		13.2			0.0			5.6			9.5	
Approach LOS		B			A			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		9.1		22.5		9.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		13.7		5.1		11.8		2.1				
Green Ext Time (p_c), s		1.2		0.4		2.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			8.7									
HCM 6th LOS			A									



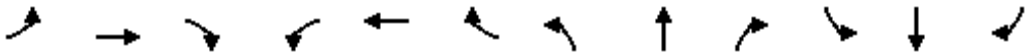
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	2	80	0	38	1	153	146	100	274	0
Future Volume (veh/h)	2	0	2	80	0	38	1	153	146	100	274	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	3	0	-1	113	0	13	1	204	27	133	365	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	0	408	274	0	755	341	1150	150	495	681	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.48	0.36	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1017	3160	413	1149	1870	0
Grp Volume(v), veh/h	0	-1	-1	113	0	13	1	114	117	133	365	0
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1781	0	1585	1017	1777	1796	1149	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	0.2	0.0	2.4	2.5	5.0	8.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.7	0.0	0.2	8.7	2.4	2.5	7.5	8.7	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	0	274	0	755	341	647	654	495	681	0
V/C Ratio(X)	0.00	0.00	0.00	0.41	0.00	0.02	0.00	0.18	0.18	0.27	0.54	0.00
Avail Cap(c_a), veh/h	0	0	0	1138	0	872	341	647	654	495	681	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.8	0.0	7.8	17.6	12.2	12.2	14.8	14.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.6	0.6	0.3	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	0.1	0.0	0.9	0.9	1.1	3.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.8	0.0	7.8	17.6	12.8	12.8	15.0	15.0	0.0
LnGrp LOS	A	A	A	C	A	A	B	B	B	B	B	A
Approach Vol, veh/h		-2			126			232			498	
Approach Delay, s/veh		0.0			23.9			12.8			15.0	
Approach LOS		A			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	8.8	22.5		25.0	0.0	31.3				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	18.0	18.0		20.5	5.0	31.0				
Max Q Clear Time (g_c+I1), s		10.7	3.7	0.0		10.7	0.0	2.2				
Green Ext Time (p_c), s		0.8	0.3	0.0		1.8	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			15.8									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.



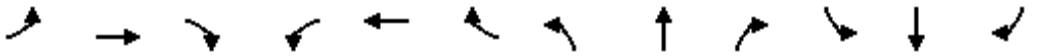
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	454	61	58	312	7	6	3	13	40	1	18
Future Volume (veh/h)	9	454	61	58	312	7	6	3	13	40	1	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	560	63	72	385	7	7	4	1	49	1	2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1132	127	377	1338	24	522	468	117	520	181	361
Arrive On Green	0.19	0.35	0.35	0.21	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3221	361	1781	3571	65	1414	1444	361	1411	557	1113
Grp Volume(v), veh/h	11	308	315	72	191	201	7	0	5	49	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1805	1781	1777	1859	1414	0	1805	1411	0	1670
Q Serve(g_s), s	0.6	15.1	15.2	3.7	8.4	8.4	0.4	0.0	0.2	2.7	0.0	0.1
Cycle Q Clear(g_c), s	0.6	15.1	15.2	3.7	8.4	8.4	0.5	0.0	0.2	2.9	0.0	0.1
Prop In Lane	1.00		0.20	1.00		0.03	1.00		0.20	1.00		0.67
Lane Grp Cap(c), veh/h	335	624	634	377	666	697	522	0	586	520	0	542
V/C Ratio(X)	0.03	0.49	0.50	0.19	0.29	0.29	0.01	0.00	0.01	0.09	0.00	0.01
Avail Cap(c_a), veh/h	335	624	634	377	666	697	522	0	586	520	0	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	28.3	28.3	35.9	24.3	24.3	25.6	0.0	25.4	26.4	0.0	25.4
Incr Delay (d2), s/veh	0.2	2.8	2.8	1.1	1.1	1.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	6.8	6.9	1.7	3.7	3.8	0.1	0.0	0.1	1.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	31.0	31.0	37.1	25.4	25.4	25.6	0.0	25.4	26.8	0.0	25.4
LnGrp LOS	D	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		634			464			12			52	
Approach Delay, s/veh		31.1			27.2			25.5			26.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	46.6		40.0	27.0	44.0		40.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	20.9	40.6		36.0	23.5	* 39		36.0				
Max Q Clear Time (g_c+I1), s	2.6	10.4		4.9	5.7	17.2		2.5				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.1	3.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		29.3	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



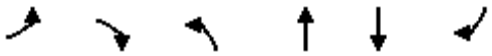
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	0	114	0	0	0	251	1191	0	1	677	485
Future Volume (veh/h)	415	0	114	0	0	0	251	1191	0	1	677	485
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	456	0	16	0	0	0	276	1309	-116	1	744	533
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	542	0	511	0	2	0	303	2572	0	2	1972	1121
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.00	0.17	0.72	0.00	0.00	0.55	0.55
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	456	0	16	0	0	0	276	1193	0	1	744	533
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	15.2	0.0	0.8	0.0	0.0	0.0	18.6	17.0	0.0	0.1	14.4	18.1
Cycle Q Clear(g_c), s	15.2	0.0	0.8	0.0	0.0	0.0	18.6	17.0	0.0	0.1	14.4	18.1
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	542	0	511	0	2	0	303	2572	0	2	1972	1121
V/C Ratio(X)	0.84	0.00	0.03	0.00	0.00	0.00	0.91	0.46	0.00	0.51	0.38	0.48
Avail Cap(c_a), veh/h	876	0	659	0	84	0	438	2572	0	80	1972	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.00	0.87	0.00	0.00	0.00	0.83	0.83	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	28.3	0.0	0.0	0.0	49.7	7.0	0.0	60.9	15.3	7.9
Incr Delay (d2), s/veh	3.6	0.0	0.0	0.0	0.0	0.0	12.4	0.5	0.0	61.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	0.3	0.0	0.0	0.0	9.1	5.4	0.0	0.1	5.6	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	28.3	0.0	0.0	0.0	62.2	7.5	0.0	122.0	15.8	9.3
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		472			0			1469			1278	
Approach Delay, s/veh		53.0			0.0			17.8			13.2	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	94.3		23.6	24.7	73.7		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	62.0		30.0	30.0	37.5		5.5				
Max Q Clear Time (g_c+I1), s	2.1	19.0		17.2	20.6	20.1		0.0				
Green Ext Time (p_c), s	0.0	18.1		1.4	0.2	10.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.1	
HCM 6th LOS		C	

Notes

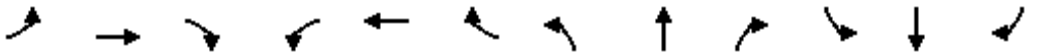
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	259	76	83	341	347	191
Future Volume (vph)	259	76	83	341	347	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3351	
Flt Permitted	0.95	1.00	0.44	1.00	1.00	
Satd. Flow (perm)	1770	1583	814	1863	3351	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	276	81	88	363	369	203
RTOR Reduction (vph)	0	58	0	0	81	0
Lane Group Flow (vph)	276	23	88	363	491	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	12.4	12.4	21.5	21.5	21.5	
Effective Green, g (s)	12.4	12.4	21.5	21.5	21.5	
Actuated g/C Ratio	0.28	0.28	0.49	0.49	0.49	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	498	446	397	910	1637	
v/s Ratio Prot	c0.16			c0.19	0.15	
v/s Ratio Perm		0.01	0.11			
v/c Ratio	0.55	0.05	0.22	0.40	0.30	
Uniform Delay, d1	13.4	11.5	6.5	7.1	6.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.3	0.3	0.1	
Delay (s)	14.8	11.6	6.7	7.4	6.8	
Level of Service	B	B	A	A	A	
Approach Delay (s)	14.1			7.3	6.8	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	13.1
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

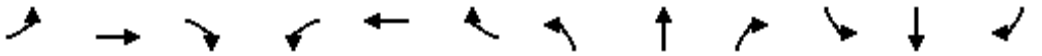
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	525	32	214	437	94	20	771	242	150	1035	315
Future Volume (veh/h)	225	525	32	214	437	94	20	771	242	150	1035	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	559	4	228	465	14	21	820	74	160	1101	153
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	711	317	432	599	267	83	1046	466	196	1272	567
Arrive On Green	0.16	0.20	0.20	0.12	0.17	0.17	0.05	0.29	0.29	0.11	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	239	559	4	228	465	14	21	820	74	160	1101	153
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	10.4	11.9	0.2	4.9	10.0	0.6	0.9	16.8	2.7	7.0	22.9	5.5
Cycle Q Clear(g_c), s	10.4	11.9	0.2	4.9	10.0	0.6	0.9	16.8	2.7	7.0	22.9	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	711	317	432	599	267	83	1046	466	196	1272	567
V/C Ratio(X)	0.86	0.79	0.01	0.53	0.78	0.05	0.25	0.78	0.16	0.82	0.87	0.27
Avail Cap(c_a), veh/h	403	1587	708	565	1363	608	224	1654	738	291	1788	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	30.2	25.5	32.6	31.6	27.7	36.6	25.7	20.8	34.6	23.8	18.1
Incr Delay (d2), s/veh	8.6	0.7	0.0	0.4	0.8	0.0	0.6	0.5	0.1	6.4	2.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.9	0.1	2.0	4.2	0.2	0.4	6.5	0.9	3.2	8.9	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	30.9	25.5	33.0	32.4	27.8	37.1	26.2	20.8	41.0	26.3	18.2
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	B
Approach Vol, veh/h		802			707			915			1414	
Approach Delay, s/veh		34.0			32.5			26.0			27.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	22.4	13.8	28.4	17.4	19.9	8.7	33.5
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	13.0	35.5	13.0	37.0	18.0	30.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	6.9	13.9	9.0	18.8	12.4	12.0	2.9	24.9
Green Ext Time (p_c), s	0.1	1.8	0.0	2.5	0.1	1.5	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C



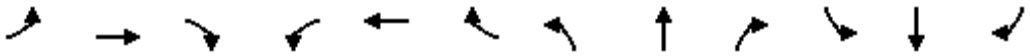
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	474	63	542	432	73	80	671	360	96	842	254
Future Volume (veh/h)	342	474	63	542	432	73	80	671	360	96	842	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	494	57	565	450	64	83	699	375	100	877	99
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	688	79	648	860	122	106	1174	524	127	1150	513
Arrive On Green	0.13	0.21	0.21	0.19	0.28	0.28	0.06	0.33	0.33	0.07	0.32	0.32
Sat Flow, veh/h	3456	3212	369	3456	3125	442	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	356	272	279	565	255	259	83	699	375	100	877	99
Grp Sat Flow(s),veh/h/ln	1728	1777	1804	1728	1777	1791	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.3	13.2	13.3	14.7	11.2	11.4	4.3	15.2	19.2	5.1	20.5	2.7
Cycle Q Clear(g_c), s	9.3	13.2	13.3	14.7	11.2	11.4	4.3	15.2	19.2	5.1	20.5	2.7
Prop In Lane	1.00		0.20	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	381	387	648	489	493	106	1174	524	127	1150	513
V/C Ratio(X)	0.81	0.72	0.72	0.87	0.52	0.53	0.78	0.60	0.72	0.79	0.76	0.19
Avail Cap(c_a), veh/h	710	711	721	822	768	774	135	1471	656	154	1510	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	33.7	33.8	36.5	28.4	28.4	42.9	25.8	27.2	42.3	28.1	9.8
Incr Delay (d2), s/veh	1.5	3.6	3.6	7.2	1.2	1.2	15.4	0.7	3.4	16.2	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.9	6.0	6.6	4.8	4.9	2.2	6.0	7.4	2.7	8.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	37.3	37.4	43.7	29.6	29.7	58.3	26.5	30.6	58.5	30.2	10.0
LnGrp LOS	D	D	D	D	C	C	E	C	C	E	C	B
Approach Vol, veh/h		907			1079			1157			1076	
Approach Delay, s/veh		38.7			37.0			30.1			31.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.6	15.7	29.9	10.6	36.3	21.3	24.3
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	7.0	* 39	19.0	40.0	8.0	38.3	22.0	37.0
Max Q Clear Time (g_c+I1), s	6.3	22.5	11.3	13.4	7.1	21.2	16.7	15.3
Green Ext Time (p_c), s	0.0	7.4	0.4	4.5	0.0	7.5	0.6	4.6

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



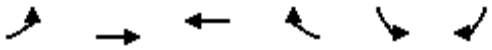
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	813	14	31	919	241	14	39	84	567	53	32
Future Volume (veh/h)	13	813	14	31	919	241	14	39	84	567	53	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	856	4	33	967	238	15	41	1	665	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	902	764	45	1397	343	77	81	53	771	405	0
Arrive On Green	0.01	0.48	0.48	0.03	0.49	0.49	0.04	0.04	0.04	0.22	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	2828	694	1781	1870	1231	3563	1870	0
Grp Volume(v), veh/h	14	856	4	33	607	598	15	41	1	665	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1745	1781	1870	1231	1781	1870	0
Q Serve(g_s), s	0.7	37.5	0.1	1.6	22.5	22.6	0.7	1.8	0.1	15.4	0.0	0.0
Cycle Q Clear(g_c), s	0.7	37.5	0.1	1.6	22.5	22.6	0.7	1.8	0.1	15.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	24	902	764	45	878	862	77	81	53	771	405	0
V/C Ratio(X)	0.59	0.95	0.01	0.73	0.69	0.69	0.19	0.51	0.02	0.86	0.00	0.00
Avail Cap(c_a), veh/h	106	915	776	83	878	862	560	588	387	1121	588	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.1	21.2	11.5	41.5	16.7	16.7	39.6	40.2	39.3	32.4	0.0	0.0
Incr Delay (d2), s/veh	8.6	19.0	0.0	8.1	3.0	3.1	0.5	1.8	0.1	3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	19.4	0.0	0.8	9.0	8.9	0.3	0.9	0.0	6.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	40.3	11.6	49.6	19.7	19.8	40.1	42.0	39.4	35.9	0.0	0.0
LnGrp LOS	D	D	B	D	B	B	D	D	D	D	A	A
Approach Vol, veh/h		874			1238			57			665	
Approach Delay, s/veh		40.3			20.5			41.4			35.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	47.9		23.1	5.6	48.9		8.2				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.0	42.0		27.0	5.1	40.9		27.0				
Max Q Clear Time (g_c+I1), s	3.6	39.5		17.4	2.7	24.6		3.8				
Green Ext Time (p_c), s	0.0	1.9		1.1	0.0	11.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		30.7
HCM 6th LOS		C

Notes

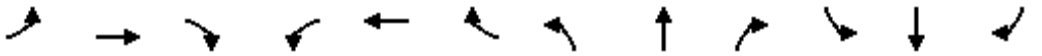
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	1446	1226	21	23	10
Future Volume (veh/h)	6	1446	1226	21	23	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	1538	1304	21	24	-1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	231	1600	1495	1267	69	62
Arrive On Green	0.01	0.86	0.80	0.80	0.04	0.00
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	6	1538	1304	21	24	-1
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	60.2	41.6	0.2	1.2	0.0
Cycle Q Clear(g_c), s	0.1	60.2	41.6	0.2	1.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	231	1600	1495	1267	69	62
V/C Ratio(X)	0.03	0.96	0.87	0.02	0.35	-0.02
Avail Cap(c_a), veh/h	299	1600	1495	1267	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.75	0.75	1.00	0.00
Uniform Delay (d), s/veh	12.0	5.3	6.0	1.8	42.1	0.0
Incr Delay (d2), s/veh	0.0	6.6	5.6	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.3	10.6	0.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	11.9	11.6	1.9	43.2	0.0
LnGrp LOS	B	B	B	A	D	A
Approach Vol, veh/h		1544	1325		23	
Approach Delay, s/veh		11.9	11.4		45.1	
Approach LOS		B	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.1	76.9		8.0		82.0
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	2.1	43.6		3.2		62.2
Green Ext Time (p_c), s	0.0	6.4		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1086	360	130	1013	129	176	149	139	217	277	64
Future Volume (veh/h)	59	1086	360	130	1013	129	176	149	139	217	277	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	1168	282	140	1089	0	189	160	21	233	298	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1557	695	172	1739		259	343	290	307	359	304
Arrive On Green	0.05	0.44	0.44	0.10	0.49	0.00	0.07	0.18	0.18	0.09	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	63	1168	282	140	1089	0	189	160	21	233	298	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.3	25.9	7.7	7.3	21.3	0.0	5.0	7.2	1.0	6.2	14.4	0.7
Cycle Q Clear(g_c), s	3.3	25.9	7.7	7.3	21.3	0.0	5.0	7.2	1.0	6.2	14.4	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	1557	695	172	1739		259	343	290	307	359	304
V/C Ratio(X)	0.78	0.75	0.41	0.81	0.63		0.73	0.47	0.07	0.76	0.83	0.06
Avail Cap(c_a), veh/h	170	1898	847	284	2124		330	467	396	477	546	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	22.1	8.2	41.7	17.7	0.0	42.6	34.4	31.8	41.9	36.6	21.5
Incr Delay (d2), s/veh	5.8	1.6	0.5	3.5	0.6	0.0	3.9	1.4	0.1	1.5	8.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.4	3.6	3.3	8.2	0.0	2.2	3.3	0.4	2.6	7.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	23.7	8.8	45.2	18.3	0.0	46.5	35.8	32.0	43.4	44.8	21.6
LnGrp LOS	D	C	A	D	B		D	D	C	D	D	C
Approach Vol, veh/h		1513			1229	A		370			548	
Approach Delay, s/veh		22.1			21.3			41.0			43.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	47.0	11.6	22.6	8.3	51.8	12.4	21.8
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	15.0	50.3	9.0	* 28	9.0	56.3	13.0	23.5
Max Q Clear Time (g_c+I1), s	9.3	27.9	7.0	16.4	5.3	23.3	8.2	9.2
Green Ext Time (p_c), s	0.1	13.4	0.1	1.6	0.0	13.2	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

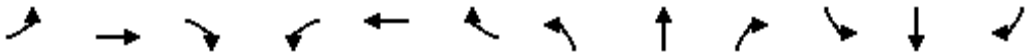
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1086	218	65	1348	575	78
Future Volume (veh/h)	1086	218	65	1348	575	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1131	206	68	1404	599	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2314	421	87	2267	767	352
Arrive On Green	0.53	0.53	0.05	0.64	0.22	0.22
Sat Flow, veh/h	4510	790	1781	3647	3456	1585
Grp Volume(v), veh/h	887	450	68	1404	599	17
Grp Sat Flow(s),veh/h/ln	1702	1728	1781	1777	1728	1585
Q Serve(g_s), s	11.7	11.7	2.7	16.9	11.6	0.6
Cycle Q Clear(g_c), s	11.7	11.7	2.7	16.9	11.6	0.6
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1814	921	87	2267	767	352
V/C Ratio(X)	0.49	0.49	0.78	0.62	0.78	0.05
Avail Cap(c_a), veh/h	2817	1430	300	3739	1697	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	10.5	33.5	7.7	26.1	21.8
Incr Delay (d2), s/veh	0.2	0.5	5.6	0.5	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.7	1.2	4.6	4.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.8	11.0	39.1	8.2	27.9	21.9
LnGrp LOS	B	B	D	A	C	C
Approach Vol, veh/h	1337			1472	616	
Approach Delay, s/veh	10.8			9.6	27.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.5	43.0		20.8		50.5
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	12.0	59.0		35.0		75.0
Max Q Clear Time (g_c+I1), s	4.7	13.7		13.6		18.9
Green Ext Time (p_c), s	0.0	14.6		2.2		26.6

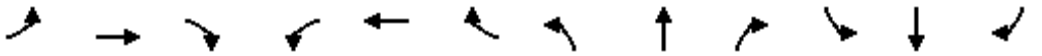
Intersection Summary		
HCM 6th Ctrl Delay	13.4	
HCM 6th LOS	B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	675	213	184	1013	52	263	280	201	74	307	201
Future Volume (veh/h)	202	675	213	184	1013	52	263	280	201	74	307	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	213	711	181	194	1066	16	277	295	59	78	323	117
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	1381	347	223	1170	522	304	1027	458	99	447	159
Arrive On Green	0.14	0.34	0.34	0.12	0.33	0.33	0.17	0.29	0.29	0.06	0.17	0.17
Sat Flow, veh/h	1781	4068	1023	1781	3554	1585	1781	3554	1585	1781	2569	914
Grp Volume(v), veh/h	213	594	298	194	1066	16	277	295	59	78	222	218
Grp Sat Flow(s),veh/h/ln	1781	1702	1686	1781	1777	1585	1781	1777	1585	1781	1777	1706
Q Serve(g_s), s	13.2	15.7	16.0	12.1	32.4	0.8	17.2	7.3	3.1	4.9	13.3	13.7
Cycle Q Clear(g_c), s	13.2	15.7	16.0	12.1	32.4	0.8	17.2	7.3	3.1	4.9	13.3	13.7
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	241	1156	572	223	1170	522	304	1027	458	99	309	297
V/C Ratio(X)	0.88	0.51	0.52	0.87	0.91	0.03	0.91	0.29	0.13	0.78	0.72	0.74
Avail Cap(c_a), veh/h	253	1156	572	285	1198	535	316	1356	605	190	552	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	29.8	29.9	48.4	36.2	25.6	45.9	31.1	29.6	52.5	43.9	44.1
Incr Delay (d2), s/veh	26.8	0.6	1.4	17.5	10.7	0.0	27.7	0.3	0.2	5.0	5.2	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	6.3	6.5	6.3	15.2	0.3	9.8	3.1	1.2	2.3	6.2	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.7	30.4	31.2	65.9	46.9	25.6	73.6	31.3	29.8	57.5	49.1	50.0
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h		1105			1276			631			518	
Approach Delay, s/veh		39.2			49.5			49.7			50.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	44.3	24.2	25.1	20.2	43.1	11.3	38.1
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	18.0	36.0	20.0	35.0	16.0	38.0	12.0	43.0
Max Q Clear Time (g_c+I1), s	14.1	18.0	19.2	15.7	15.2	34.4	6.9	9.3
Green Ext Time (p_c), s	0.1	8.1	0.0	3.9	0.0	2.7	0.0	3.7

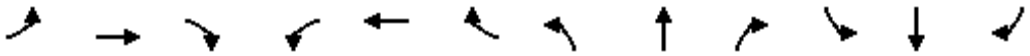
Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	2	110	28	5	36	93	625	3	21	625	144
Future Volume (veh/h)	120	2	110	28	5	36	93	625	3	21	625	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	2	25	31	5	4	102	687	3	23	687	143
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	245	219	402	275	194	373	1069	5	475	863	180
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1406	1777	1585	1383	1990	1404	661	1861	8	753	1502	313
Grp Volume(v), veh/h	132	2	25	31	4	5	102	0	690	23	0	830
Grp Sat Flow(s),veh/h/ln	1406	1777	1585	1383	1777	1618	661	0	1869	753	0	1814
Q Serve(g_s), s	2.8	0.0	0.4	0.6	0.1	0.1	4.5	0.0	7.8	0.7	0.0	11.2
Cycle Q Clear(g_c), s	2.9	0.0	0.4	1.1	0.1	0.1	15.7	0.0	7.8	8.5	0.0	11.2
Prop In Lane	1.00		1.00	1.00		0.87	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	420	245	219	402	245	223	373	0	1074	475	0	1042
V/C Ratio(X)	0.31	0.01	0.11	0.08	0.02	0.02	0.27	0.00	0.64	0.05	0.00	0.80
Avail Cap(c_a), veh/h	1034	1021	911	1006	1021	930	373	0	1074	475	0	1042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.6	11.8	12.3	11.7	11.7	11.4	0.0	4.5	7.3	0.0	5.2
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.0	0.0	1.8	0.0	3.0	0.2	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	0.2	0.0	0.0	0.6	0.0	1.5	0.1	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	11.7	12.1	12.4	11.7	11.7	13.2	0.0	7.4	7.5	0.0	11.5
LnGrp LOS	B	B	B	B	B	B	B	A	A	A	A	B
Approach Vol, veh/h		159			40			792			853	
Approach Delay, s/veh		13.1			12.2			8.2			11.4	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		8.8		22.5		8.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		17.7		4.9		13.2		3.1				
Green Ext Time (p_c), s		0.2		0.4		2.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									



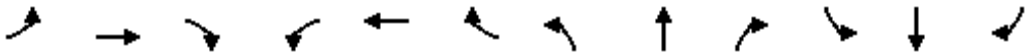
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	120	0	120	0	227	84	104	167	0
Future Volume (veh/h)	0	0	0	120	0	120	0	227	84	104	167	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	155	0	57	0	241	37	111	178	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	598	0	305	0	769	128	1092	165	457	664	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.49	0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1206	3075	464	1101	1870	0
Grp Volume(v), veh/h	0	0	0	155	0	57	0	137	141	111	178	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	1206	1777	1762	1101	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.3	0.0	1.1	0.0	3.0	3.1	4.4	3.8	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.3	0.0	1.1	0.0	3.0	3.1	7.6	3.8	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	598	0	305	0	769	128	631	626	457	664	0
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.00	0.07	0.00	0.22	0.22	0.24	0.27	0.00
Avail Cap(c_a), veh/h	0	598	0	1170	0	887	128	631	626	457	664	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.6	0.0	7.7	0.0	12.7	12.7	15.4	12.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.8	0.8	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.0	0.0	0.3	0.0	1.1	1.2	1.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.9	0.0	7.8	0.0	13.5	13.6	15.7	13.2	0.0
LnGrp LOS	A	A	A	C	A	A	A	B	B	B	B	A
Approach Vol, veh/h		0			212			278			289	
Approach Delay, s/veh		0.0			21.1			13.5			14.1	
Approach LOS					C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	9.3	22.5		24.5	0.0	31.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.0	18.5	18.0		20.0	5.0	31.5				
Max Q Clear Time (g_c+I1), s		5.1	4.3	0.0		9.6	0.0	3.1				
Green Ext Time (p_c), s		1.2	0.4	0.0		1.0	0.0	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



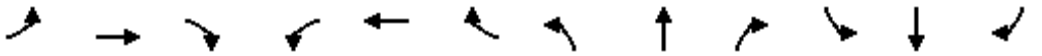
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	531	164	61	434	12	5	8	66	217	10	78
Future Volume (veh/h)	83	531	164	61	434	12	5	8	66	217	10	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	559	117	64	457	-32	5	8	68	228	11	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	1055	220	329	1249	0	469	58	493	475	74	480
Arrive On Green	0.19	0.36	0.36	0.18	0.35	0.00	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	2927	611	1781	3647	0	1316	170	1441	1323	217	1401
Grp Volume(v), veh/h	87	339	337	64	425	0	5	0	76	228	0	82
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1777	0	1316	0	1611	1323	0	1618
Q Serve(g_s), s	4.6	16.7	16.8	3.4	9.8	0.0	0.3	0.0	3.6	15.9	0.0	3.9
Cycle Q Clear(g_c), s	4.6	16.7	16.8	3.4	9.8	0.0	4.2	0.0	3.6	19.6	0.0	3.9
Prop In Lane	1.00		0.35	1.00		0.00	1.00		0.89	1.00		0.87
Lane Grp Cap(c), veh/h	345	640	634	329	1249	0	469	0	551	475	0	554
V/C Ratio(X)	0.25	0.53	0.53	0.19	0.34	0.00	0.01	0.00	0.14	0.48	0.00	0.15
Avail Cap(c_a), veh/h	345	640	634	329	1249	0	469	0	551	475	0	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	28.1	28.1	38.3	26.5	0.0	26.7	0.0	25.2	31.9	0.0	25.3
Incr Delay (d2), s/veh	1.7	3.1	3.2	1.3	0.7	0.0	0.0	0.0	0.5	3.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.5	7.5	1.6	4.2	0.0	0.1	0.0	1.5	5.5	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	31.2	31.3	39.6	27.3	0.0	26.8	0.0	25.7	35.4	0.0	25.8
LnGrp LOS	D	C	C	D	C	A	C	A	C	D	A	C
Approach Vol, veh/h		763			489			81			310	
Approach Delay, s/veh		32.2			28.9			25.8			32.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	44.0		42.0	24.0	45.0		42.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	21.5	38.0		38.0	20.5	* 40		38.0				
Max Q Clear Time (g_c+I1), s	6.6	11.8		21.6	5.4	18.8		6.2				
Green Ext Time (p_c), s	0.2	2.8		1.1	0.1	4.1		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			31.0									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	572	0	293	0	0	0	165	550	0	3	915	528
Future Volume (veh/h)	572	0	293	0	0	0	165	550	0	3	915	528
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	596	0	134	0	0	0	172	573	-70	3	953	550
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	697	0	487	0	2	0	199	2411	0	6	2025	1213
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.00	0.11	0.68	0.00	0.00	0.57	0.57
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	596	0	134	0	0	0	172	503	0	3	953	550
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	19.7	0.0	7.8	0.0	0.0	0.0	11.6	6.5	0.0	0.2	19.2	15.2
Cycle Q Clear(g_c), s	19.7	0.0	7.8	0.0	0.0	0.0	11.6	6.5	0.0	0.2	19.2	15.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	697	0	487	0	2	0	199	2411	0	6	2025	1213
V/C Ratio(X)	0.86	0.00	0.28	0.00	0.00	0.00	0.86	0.21	0.00	0.53	0.47	0.45
Avail Cap(c_a), veh/h	964	0	606	0	84	0	307	2411	0	80	2025	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.00	0.81	0.00	0.00	0.00	0.87	0.87	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	32.0	0.0	0.0	0.0	53.3	7.4	0.0	60.7	15.4	5.1
Incr Delay (d2), s/veh	4.7	0.0	0.2	0.0	0.0	0.0	8.5	0.2	0.0	25.8	0.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	3.1	0.0	0.0	0.0	5.5	2.2	0.0	0.1	7.4	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	0.0	32.2	0.0	0.0	0.0	61.8	7.5	0.0	86.5	16.2	6.4
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		730			0			675			1506	
Approach Delay, s/veh		48.4			0.0			21.4			12.8	
Approach LOS		D						C			B	

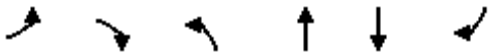
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.4	88.8		28.9	17.6	75.5		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	59.0		33.0	21.0	43.5		5.5				
Max Q Clear Time (g_c+I1), s	2.2	8.5		21.7	13.6	21.2		0.0				
Green Ext Time (p_c), s	0.0	5.9		2.1	0.1	14.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.7	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

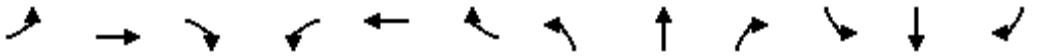
FUTURE BASELINE PLUS HIGH-BUILDOUT SCENARIO
AM & PM PEAK HOUR LOS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	372	159	109	328	273	264
Future Volume (vph)	372	159	109	328	273	264
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.93	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3278	
Flt Permitted	0.95	1.00	0.35	1.00	1.00	
Satd. Flow (perm)	1770	1583	649	1863	3278	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	477	204	140	421	350	338
RTOR Reduction (vph)	0	129	0	0	183	0
Lane Group Flow (vph)	477	75	140	421	505	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	21.5	21.5	26.7	26.7	26.7	
Effective Green, g (s)	21.5	21.5	26.7	26.7	26.7	
Actuated g/C Ratio	0.37	0.37	0.46	0.46	0.46	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	652	583	297	853	1501	
v/s Ratio Prot	c0.27			c0.23	0.15	
v/s Ratio Perm		0.05	0.22			
v/c Ratio	0.73	0.13	0.47	0.49	0.34	
Uniform Delay, d1	15.9	12.2	10.9	11.1	10.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	0.1	1.2	0.5	0.1	
Delay (s)	20.1	12.3	12.1	11.5	10.3	
Level of Service	C	B	B	B	B	
Approach Delay (s)	17.8			11.7	10.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	13.1
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

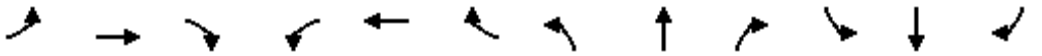
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	377	591	25	245	469	159	32	1079	340	169	611	267
Future Volume (veh/h)	377	591	25	245	469	159	32	1079	340	169	611	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	414	649	5	269	515	27	35	1186	196	186	671	111
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	310	888	396	332	611	273	107	1233	550	196	1411	629
Arrive On Green	0.17	0.25	0.25	0.10	0.17	0.17	0.06	0.35	0.35	0.11	0.40	0.40
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	414	649	5	269	515	27	35	1186	196	186	671	111
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.0	18.3	0.3	8.3	15.3	1.6	2.1	35.7	10.1	11.3	15.3	5.0
Cycle Q Clear(g_c), s	19.0	18.3	0.3	8.3	15.3	1.6	2.1	35.7	10.1	11.3	15.3	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	310	888	396	332	611	273	107	1233	550	196	1411	629
V/C Ratio(X)	1.34	0.73	0.01	0.81	0.84	0.10	0.33	0.96	0.36	0.95	0.48	0.18
Avail Cap(c_a), veh/h	310	1091	486	475	960	428	163	1237	552	196	1411	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	37.6	30.8	48.4	43.8	38.1	49.2	34.9	26.6	48.3	24.5	21.3
Incr Delay (d2), s/veh	171.2	1.4	0.0	4.5	2.2	0.1	0.7	17.0	0.1	49.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.0	8.0	0.1	3.7	6.8	0.6	0.9	17.4	3.6	7.6	6.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	216.2	38.9	30.8	52.8	46.0	38.1	49.9	52.0	26.7	97.7	24.6	21.4
LnGrp LOS	F	D	C	D	D	D	D	D	C	F	C	C
Approach Vol, veh/h		1068			811			1417			968	
Approach Delay, s/veh		107.6			48.0			48.4			38.2	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	33.8	17.0	42.9	24.0	25.3	11.5	48.3
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	15.0	33.5	12.0	38.0	19.0	29.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	10.3	20.3	13.3	37.7	21.0	17.3	4.1	17.3
Green Ext Time (p_c), s	0.2	1.9	0.0	0.2	0.0	1.5	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E



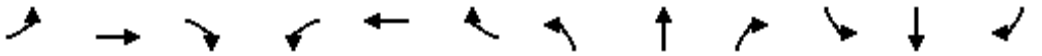
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	513	60	436	475	123	124	963	497	40	731	338
Future Volume (veh/h)	470	513	60	436	475	123	124	963	497	40	731	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	560	633	84	651	633	162	177	1133	512	55	860	101
Peak Hour Factor	0.84	0.81	0.58	0.67	0.75	0.59	0.70	0.85	0.97	0.73	0.85	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	611	880	117	559	740	189	178	1316	587	61	1031	460
Arrive On Green	0.18	0.28	0.28	0.16	0.26	0.26	0.10	0.37	0.37	0.03	0.29	0.29
Sat Flow, veh/h	3456	3154	418	3456	2802	716	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	560	356	361	651	401	394	177	1133	512	55	860	101
Grp Sat Flow(s),veh/h/ln	1728	1777	1795	1728	1777	1741	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	18.7	21.2	21.3	19.0	25.2	25.3	11.7	34.6	35.3	3.6	26.6	3.6
Cycle Q Clear(g_c), s	18.7	21.2	21.3	19.0	25.2	25.3	11.7	34.6	35.3	3.6	26.6	3.6
Prop In Lane	1.00		0.23	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	611	496	501	559	469	460	178	1316	587	61	1031	460
V/C Ratio(X)	0.92	0.72	0.72	1.17	0.85	0.86	0.99	0.86	0.87	0.91	0.83	0.22
Avail Cap(c_a), veh/h	617	559	565	559	529	519	178	1370	611	61	1188	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	38.2	38.2	49.3	41.1	41.1	52.9	34.2	34.4	56.6	39.1	12.8
Incr Delay (d2), s/veh	18.2	4.4	4.5	92.7	12.6	13.0	65.7	5.9	13.2	81.6	5.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	9.7	9.9	15.3	12.5	12.3	8.3	15.2	15.3	3.0	11.8	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	42.7	42.7	142.0	53.7	54.1	118.5	40.1	47.6	138.2	44.2	13.1
LnGrp LOS	E	D	D	F	D	D	F	D	D	F	D	B
Approach Vol, veh/h		1277			1446			1822			1016	
Approach Delay, s/veh		52.8			93.6			49.8			46.2	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	39.8	24.8	35.5	8.0	49.2	23.0	37.3
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	10.0	* 39	21.0	35.0	4.0	45.3	19.0	37.0
Max Q Clear Time (g_c+I1), s	13.7	28.6	20.7	27.3	5.6	37.3	21.0	23.3
Green Ext Time (p_c), s	0.0	5.5	0.1	3.7	0.0	6.2	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	61.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



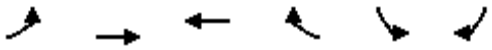
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1039	9	80	1002	221	27	46	35	148	56	28
Future Volume (veh/h)	15	1039	9	80	1002	221	27	46	35	148	56	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	15	1071	4	82	1033	219	28	47	3	120	104	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	992	840	102	1674	354	93	98	66	186	147	41
Arrive On Green	0.01	0.53	0.53	0.06	0.57	0.57	0.05	0.05	0.05	0.10	0.10	0.10
Sat Flow, veh/h	1781	1870	1585	1781	2919	617	1781	1870	1259	1781	1407	392
Grp Volume(v), veh/h	15	1071	4	82	628	624	28	47	3	120	0	133
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1759	1781	1870	1259	1781	0	1800
Q Serve(g_s), s	0.7	41.5	0.1	3.6	18.2	18.4	1.2	1.9	0.2	5.1	0.0	5.6
Cycle Q Clear(g_c), s	0.7	41.5	0.1	3.6	18.2	18.4	1.2	1.9	0.2	5.1	0.0	5.6
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	25	992	840	102	1019	1009	93	98	66	186	0	188
V/C Ratio(X)	0.59	1.08	0.00	0.80	0.62	0.62	0.30	0.48	0.05	0.64	0.00	0.71
Avail Cap(c_a), veh/h	114	992	840	102	1019	1009	615	645	434	615	0	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	18.4	8.7	36.4	11.0	11.0	35.7	36.1	35.2	33.6	0.0	33.9
Incr Delay (d2), s/veh	7.9	52.7	0.0	32.7	1.6	1.7	0.7	1.4	0.1	1.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	29.5	0.0	2.4	6.4	6.4	0.5	0.9	0.1	2.2	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	71.1	8.7	69.2	12.6	12.7	36.4	37.4	35.3	35.0	0.0	35.7
LnGrp LOS	D	F	A	E	B	B	D	D	D	D	A	D
Approach Vol, veh/h		1090			1334			78			253	
Approach Delay, s/veh		70.5			16.2			37.0			35.4	
Approach LOS		E			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	48.0		12.7	5.6	51.4		8.6				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.5	41.5		27.0	5.0	41.0		27.0				
Max Q Clear Time (g_c+I1), s	5.6	43.5		7.6	2.7	20.4		3.9				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	14.1		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		40.0
HCM 6th LOS		D

Notes

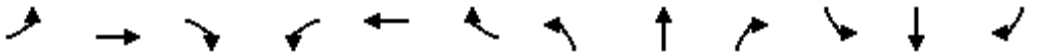
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	76	1144	957	367	263	128
Future Volume (veh/h)	76	1144	957	367	263	128
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1257	1052	347	289	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	202	1331	1164	987	326	290
Arrive On Green	0.04	0.71	0.62	0.62	0.18	0.18
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	84	1257	1052	347	289	18
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	1.4	53.2	43.7	9.5	14.2	0.8
Cycle Q Clear(g_c), s	1.4	53.2	43.7	9.5	14.2	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	202	1331	1164	987	326	290
V/C Ratio(X)	0.42	0.94	0.90	0.35	0.89	0.06
Avail Cap(c_a), veh/h	212	1331	1164	987	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.78	0.78	1.00	1.00
Uniform Delay (d), s/veh	19.5	11.4	14.7	8.2	35.9	30.4
Incr Delay (d2), s/veh	0.1	1.9	9.3	0.8	14.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	16.5	18.2	3.0	7.5	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	13.4	24.0	9.0	50.6	30.4
LnGrp LOS	B	B	C	A	D	C
Approach Vol, veh/h		1341	1399		307	
Approach Delay, s/veh		13.7	20.2		49.4	
Approach LOS		B	C		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.0	61.0		21.0		69.0
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	3.4	45.7		16.2		55.2
Green Ext Time (p_c), s	0.0	4.3		0.2		3.7

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	1070	236	179	911	244	386	324	195	107	122	55
Future Volume (veh/h)	49	1070	236	179	911	244	386	324	195	107	122	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	1092	158	183	930	0	394	331	46	109	124	8
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	1344	599	222	1660		584	415	351	180	185	156
Arrive On Green	0.04	0.38	0.38	0.12	0.47	0.00	0.17	0.22	0.22	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	50	1092	158	183	930	0	394	331	46	109	124	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	2.3	22.5	3.0	8.2	15.4	0.0	8.7	13.6	1.9	2.5	5.2	0.3
Cycle Q Clear(g_c), s	2.3	22.5	3.0	8.2	15.4	0.0	8.7	13.6	1.9	2.5	5.2	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	1344	599	222	1660		584	415	351	180	185	156
V/C Ratio(X)	0.78	0.81	0.26	0.82	0.56		0.67	0.80	0.13	0.61	0.67	0.05
Avail Cap(c_a), veh/h	394	1474	658	394	1660		764	735	623	764	735	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	22.7	4.9	34.8	15.7	0.0	31.8	30.0	25.4	37.8	35.4	23.7
Incr Delay (d2), s/veh	7.7	3.6	0.3	3.0	0.5	0.0	0.7	5.0	0.2	1.2	5.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.3	1.8	3.6	5.8	0.0	3.4	6.2	0.7	1.0	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	26.3	5.2	37.7	16.2	0.0	32.5	35.0	25.6	39.0	41.3	23.9
LnGrp LOS	D	C	A	D	B		C	C	C	D	D	C
Approach Vol, veh/h		1300			1113	A		771			241	
Approach Delay, s/veh		24.5			19.8			33.1			39.7	
Approach LOS		C			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	36.5	18.3	12.5	6.9	43.7	8.2	22.6
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	18.0	33.8	18.0	* 32	18.0	33.8	18.0	32.0
Max Q Clear Time (g_c+I1), s	10.2	24.5	10.7	7.2	4.3	17.4	4.5	15.6
Green Ext Time (p_c), s	0.1	6.3	0.5	0.8	0.0	7.7	0.1	2.4

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

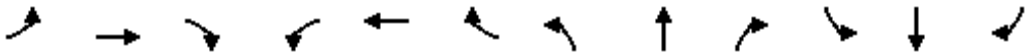
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1845	423	92	854	264	39
Future Volume (veh/h)	1845	423	92	854	264	39
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2073	451	103	960	297	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2807	588	130	2770	395	181
Arrive On Green	0.66	0.66	0.07	0.78	0.11	0.11
Sat Flow, veh/h	4397	886	1781	3647	3456	1585
Grp Volume(v), veh/h	1653	871	103	960	297	8
Grp Sat Flow(s),veh/h/ln	1702	1711	1781	1777	1728	1585
Q Serve(g_s), s	29.9	32.8	5.4	7.7	7.8	0.4
Cycle Q Clear(g_c), s	29.9	32.8	5.4	7.7	7.8	0.4
Prop In Lane		0.52	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2260	1136	130	2770	395	181
V/C Ratio(X)	0.73	0.77	0.79	0.35	0.75	0.04
Avail Cap(c_a), veh/h	2459	1236	208	3133	991	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.3	10.8	42.9	3.1	40.4	37.1
Incr Delay (d2), s/veh	1.1	2.8	4.0	0.1	2.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	10.6	2.4	1.6	3.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	13.7	46.9	3.3	43.3	37.2
LnGrp LOS	B	B	D	A	D	D
Approach Vol, veh/h	2524			1063	305	
Approach Delay, s/veh	12.2			7.5	43.1	
Approach LOS	B			A	D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.9	67.5		15.8		78.4
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	11.0	68.0		27.0		83.0
Max Q Clear Time (g_c+I1), s	7.4	34.8		9.8		9.7
Green Ext Time (p_c), s	0.0	27.7		0.9		15.2

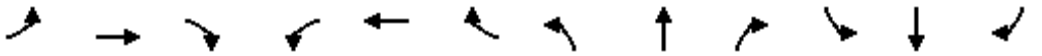
Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	1087	285	152	532	133	159	318	102	143	341	143
Future Volume (veh/h)	209	1087	285	152	532	133	159	318	102	143	341	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	1279	296	179	626	38	187	374	14	168	401	124
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	1545	357	207	1190	531	215	748	334	196	536	164
Arrive On Green	0.15	0.37	0.37	0.12	0.33	0.33	0.12	0.21	0.21	0.11	0.20	0.20
Sat Flow, veh/h	1781	4143	958	1781	3554	1585	1781	3554	1585	1781	2680	820
Grp Volume(v), veh/h	246	1051	524	179	626	38	187	374	14	168	264	261
Grp Sat Flow(s),veh/h/ln	1781	1702	1698	1781	1777	1585	1781	1777	1585	1781	1777	1723
Q Serve(g_s), s	15.3	31.7	31.7	11.2	16.1	1.8	11.7	10.5	0.8	10.5	15.8	16.1
Cycle Q Clear(g_c), s	15.3	31.7	31.7	11.2	16.1	1.8	11.7	10.5	0.8	10.5	15.8	16.1
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	275	1269	633	207	1190	531	215	748	334	196	356	345
V/C Ratio(X)	0.90	0.83	0.83	0.86	0.53	0.07	0.87	0.50	0.04	0.86	0.74	0.76
Avail Cap(c_a), veh/h	378	1325	661	236	1190	531	236	1069	477	252	550	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	32.2	32.2	49.1	30.4	25.6	48.8	39.4	35.5	49.4	42.5	42.6
Incr Delay (d2), s/veh	15.2	4.8	9.1	22.4	0.7	0.1	24.3	0.9	0.1	16.7	5.2	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	13.3	14.0	6.2	6.8	0.7	6.6	4.6	0.3	5.5	7.4	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	36.9	41.3	71.5	31.0	25.7	73.2	40.3	35.6	66.2	47.7	48.3
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1821			843			575			693	
Approach Delay, s/veh		41.6			39.4			50.9			52.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	48.2	18.6	28.1	22.4	43.9	17.5	29.3
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	15.0	44.0	15.0	35.0	24.0	35.0	16.0	34.0
Max Q Clear Time (g_c+I1), s	13.2	33.7	13.7	18.1	17.3	18.1	12.5	12.5
Green Ext Time (p_c), s	0.0	8.5	0.0	4.5	0.1	5.8	0.0	3.8

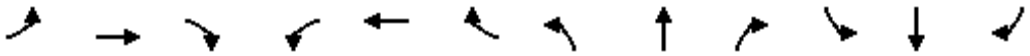
Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	15	51	3	0	3	42	333	15	44	439	167
Future Volume (veh/h)	144	15	51	3	0	3	42	333	15	44	439	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	20	1	4	0	1	55	438	16	58	578	190
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	601	30	456	310	276	369	987	36	600	742	244
Arrive On Green	0.17	0.17	0.17	0.17	0.00	0.17	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1416	3446	171	1391	1777	1585	700	1793	66	937	1348	443
Grp Volume(v), veh/h	189	10	11	4	0	1	55	0	454	58	0	768
Grp Sat Flow(s),veh/h/ln	1416	1777	1840	1391	1777	1585	700	0	1859	937	0	1791
Q Serve(g_s), s	4.2	0.2	0.2	0.1	0.0	0.0	2.2	0.0	4.8	1.3	0.0	11.0
Cycle Q Clear(g_c), s	4.2	0.2	0.2	0.2	0.0	0.0	13.2	0.0	4.8	6.0	0.0	11.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.04	1.00		0.25
Lane Grp Cap(c), veh/h	466	310	321	456	310	276	369	0	1023	600	0	986
V/C Ratio(X)	0.41	0.03	0.03	0.01	0.00	0.00	0.15	0.00	0.44	0.10	0.00	0.78
Avail Cap(c_a), veh/h	999	978	1013	979	978	873	369	0	1023	600	0	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.2	11.2	11.3	0.0	11.2	11.0	0.0	4.4	6.2	0.0	5.8
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.4	0.3	0.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.1	0.1	0.0	0.0	0.0	0.3	0.0	1.0	0.2	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	11.3	11.3	11.3	0.0	11.2	11.8	0.0	5.8	6.5	0.0	11.9
LnGrp LOS	B	B	B	B	A	B	B	A	A	A	A	B
Approach Vol, veh/h		210			5			509			826	
Approach Delay, s/veh		13.2			11.3			6.4			11.5	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		10.2		22.5		10.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		15.2		6.2		13.0		2.2				
Green Ext Time (p_c), s		0.9		0.5		2.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									



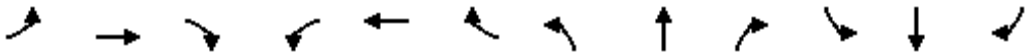
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	4	82	0	40	3	157	150	102	279	0
Future Volume (veh/h)	4	0	4	82	0	40	3	157	150	102	279	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	5	0	1	116	0	14	4	209	32	136	372	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	0	506	278	0	756	335	1125	170	488	680	0
Arrive On Green	0.00	0.00	0.32	0.08	0.00	0.48	0.36	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	0	1585	3563	0	1585	1010	3096	467	1139	1870	0
Grp Volume(v), veh/h	0	0	1	116	0	14	4	119	122	136	372	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1781	0	1585	1010	1777	1786	1139	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	1.8	0.0	0.3	0.2	2.6	2.6	5.2	8.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.8	0.0	0.3	9.1	2.6	2.6	7.9	8.9	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	506	278	0	756	335	646	649	488	680	0
V/C Ratio(X)	0.00	0.00	0.00	0.42	0.00	0.02	0.01	0.18	0.19	0.28	0.55	0.00
Avail Cap(c_a), veh/h	0	0	506	1137	0	871	335	646	649	488	680	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	13.1	24.8	0.0	7.8	17.9	12.2	12.3	15.0	14.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.1	0.6	0.6	0.3	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.7	0.0	0.1	0.0	1.0	1.0	1.2	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	13.1	25.8	0.0	7.8	17.9	12.9	12.9	15.3	15.2	0.0
LnGrp LOS	A	A	B	C	A	A	B	B	B	B	B	A
Approach Vol, veh/h		1			130			245			508	
Approach Delay, s/veh		13.1			23.8			13.0			15.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	8.9	22.5		25.0	0.0	31.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	18.0	18.0		20.5	5.0	31.0				
Max Q Clear Time (g_c+I1), s		11.1	3.8	2.0		10.9	0.0	2.3				
Green Ext Time (p_c), s		0.8	0.3	0.0		1.8	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.



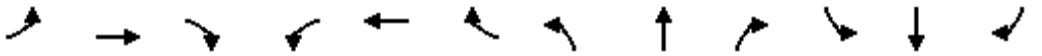
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	462	63	60	318	9	8	5	15	42	3	20
Future Volume (veh/h)	11	462	63	60	318	9	8	5	15	42	3	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	570	66	74	393	9	10	6	4	52	4	5
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1128	130	377	1331	30	516	340	226	515	245	306
Arrive On Green	0.19	0.35	0.35	0.21	0.37	0.37	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3210	371	1781	3551	81	1406	1047	698	1405	756	945
Grp Volume(v), veh/h	14	315	321	74	196	206	10	0	10	52	0	9
Grp Sat Flow(s),veh/h/ln	1781	1777	1804	1781	1777	1856	1406	0	1745	1405	0	1700
Q Serve(g_s), s	0.7	15.5	15.6	3.8	8.6	8.6	0.5	0.0	0.4	2.9	0.0	0.4
Cycle Q Clear(g_c), s	0.7	15.5	15.6	3.8	8.6	8.6	0.9	0.0	0.4	3.3	0.0	0.4
Prop In Lane	1.00		0.21	1.00		0.04	1.00		0.40	1.00		0.56
Lane Grp Cap(c), veh/h	335	624	634	377	666	695	516	0	566	515	0	551
V/C Ratio(X)	0.04	0.50	0.51	0.20	0.29	0.30	0.02	0.00	0.02	0.10	0.00	0.02
Avail Cap(c_a), veh/h	335	624	634	377	666	695	516	0	566	515	0	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	28.4	28.4	36.0	24.4	24.4	25.8	0.0	25.5	26.6	0.0	25.5
Incr Delay (d2), s/veh	0.2	2.9	2.9	1.2	1.1	1.1	0.1	0.0	0.1	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.0	7.1	1.8	3.8	3.9	0.2	0.0	0.2	1.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	31.3	31.3	37.1	25.5	25.5	25.9	0.0	25.5	27.0	0.0	25.5
LnGrp LOS	D	C	C	D	C	C	C	A	C	C	A	C
Approach Vol, veh/h		650			476			20			61	
Approach Delay, s/veh		31.4			27.3			25.7			26.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.4	46.6		40.0	27.0	44.0		40.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	20.9	40.6		36.0	23.5	* 39		36.0				
Max Q Clear Time (g_c+I1), s	2.7	10.6		5.3	5.8	17.6		2.9				
Green Ext Time (p_c), s	0.0	2.4		0.2	0.1	3.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		29.5	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



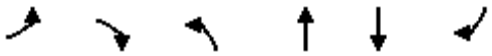
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	422	0	116	0	0	0	255	1209	0	3	688	493
Future Volume (veh/h)	422	0	116	0	0	0	255	1209	0	3	688	493
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	464	0	18	0	0	0	280	1329	-116	3	756	542
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	551	0	518	0	2	0	307	2556	0	6	1956	1117
Arrive On Green	0.15	0.00	0.15	0.00	0.00	0.00	0.17	0.72	0.00	0.00	0.55	0.55
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	464	0	18	0	0	0	280	1213	0	3	756	542
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	15.4	0.0	0.9	0.0	0.0	0.0	18.8	17.7	0.0	0.2	14.8	18.7
Cycle Q Clear(g_c), s	15.4	0.0	0.9	0.0	0.0	0.0	18.8	17.7	0.0	0.2	14.8	18.7
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	551	0	518	0	2	0	307	2556	0	6	1956	1117
V/C Ratio(X)	0.84	0.00	0.03	0.00	0.00	0.00	0.91	0.47	0.00	0.53	0.39	0.49
Avail Cap(c_a), veh/h	876	0	663	0	84	0	438	2556	0	80	1956	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.00	0.86	0.00	0.00	0.00	0.83	0.83	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	0.0	28.0	0.0	0.0	0.0	49.6	7.3	0.0	60.7	15.7	8.1
Incr Delay (d2), s/veh	3.8	0.0	0.0	0.0	0.0	0.0	12.9	0.5	0.0	25.8	0.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.4	0.0	0.0	0.0	9.2	5.7	0.0	0.1	5.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	28.0	0.0	0.0	0.0	62.6	7.8	0.0	86.5	16.2	9.6
LnGrp LOS	D	A	C	A	A	A	E	A	A	F	B	A
Approach Vol, veh/h		482			0			1493			1301	
Approach Delay, s/veh		52.9			0.0			18.1			13.6	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.4	93.8		23.9	25.0	73.1		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	62.0		30.0	30.0	37.5		5.5				
Max Q Clear Time (g_c+I1), s	2.2	19.7		17.4	20.8	20.7		0.0				
Green Ext Time (p_c), s	0.0	18.4		1.4	0.2	9.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		21.4	
HCM 6th LOS		C	

Notes

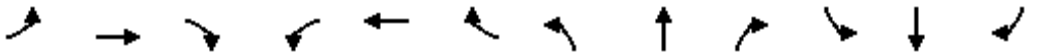
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	263	78	85	347	353	195
Future Volume (vph)	263	78	85	347	353	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.1	5.1	5.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	3351	
Flt Permitted	0.95	1.00	0.43	1.00	1.00	
Satd. Flow (perm)	1770	1583	805	1863	3351	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	280	83	90	369	376	207
RTOR Reduction (vph)	0	59	0	0	81	0
Lane Group Flow (vph)	280	24	90	369	502	0
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	3			2	2	
Permitted Phases		3	2			
Actuated Green, G (s)	12.6	12.6	21.6	21.6	21.6	
Effective Green, g (s)	12.6	12.6	21.6	21.6	21.6	
Actuated g/C Ratio	0.28	0.28	0.49	0.49	0.49	
Clearance Time (s)	5.0	5.0	5.1	5.1	5.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	503	450	392	908	1633	
v/s Ratio Prot	c0.16			c0.20	0.15	
v/s Ratio Perm		0.01	0.11			
v/c Ratio	0.56	0.05	0.23	0.41	0.31	
Uniform Delay, d1	13.5	11.5	6.5	7.3	6.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.3	0.3	0.1	
Delay (s)	14.8	11.6	6.8	7.6	6.9	
Level of Service	B	B	A	A	A	
Approach Delay (s)	14.1			7.4	6.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	44.3	Sum of lost time (s)	13.1
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	533	34	218	445	96	22	783	246	154	1051	321
Future Volume (veh/h)	229	533	34	218	445	96	22	783	246	154	1051	321
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	567	6	232	473	16	23	833	79	164	1118	159
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	737	329	418	603	269	89	1059	472	200	1281	571
Arrive On Green	0.16	0.21	0.21	0.12	0.17	0.17	0.05	0.30	0.30	0.11	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	244	567	6	232	473	16	23	833	79	164	1118	159
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	11.0	12.4	0.2	5.2	10.5	0.7	1.0	17.7	3.0	7.4	24.1	5.9
Cycle Q Clear(g_c), s	11.0	12.4	0.2	5.2	10.5	0.7	1.0	17.7	3.0	7.4	24.1	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	737	329	418	603	269	89	1059	472	200	1281	571
V/C Ratio(X)	0.86	0.77	0.02	0.55	0.78	0.06	0.26	0.79	0.17	0.82	0.87	0.28
Avail Cap(c_a), veh/h	390	1534	684	546	1318	588	217	1599	713	282	1729	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	30.7	25.9	34.1	32.7	28.6	37.6	26.5	21.3	35.7	24.5	18.7
Incr Delay (d2), s/veh	10.7	0.6	0.0	0.4	0.9	0.0	0.6	0.7	0.1	8.6	3.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	5.1	0.1	2.1	4.4	0.3	0.4	6.9	1.0	3.5	9.6	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	31.4	25.9	34.5	33.5	28.7	38.2	27.2	21.4	44.3	27.7	18.8
LnGrp LOS	D	C	C	C	C	C	D	C	C	D	C	B
Approach Vol, veh/h		817			721			935			1441	
Approach Delay, s/veh		35.2			33.7			27.0			28.6	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	23.5	14.2	29.5	18.0	20.5	9.1	34.6
Change Period (Y+Rc), s	5.0	6.5	5.0	5.0	5.0	6.5	5.0	5.0
Max Green Setting (Gmax), s	13.0	35.5	13.0	37.0	18.0	30.5	10.0	40.0
Max Q Clear Time (g_c+I1), s	7.2	14.4	9.4	19.7	13.0	12.5	3.0	26.1
Green Ext Time (p_c), s	0.1	1.9	0.0	2.6	0.1	1.5	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

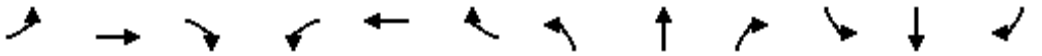
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	482	65	551	440	75	82	682	366	98	855	258
Future Volume (veh/h)	348	482	65	551	440	75	82	682	366	98	855	258
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	362	502	59	574	458	66	85	710	381	102	891	103
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	692	81	653	865	124	109	1176	524	129	1152	514
Arrive On Green	0.13	0.22	0.22	0.19	0.28	0.28	0.06	0.33	0.33	0.07	0.32	0.32
Sat Flow, veh/h	3456	3204	375	3456	3120	447	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	362	278	283	574	260	264	85	710	381	102	891	103
Grp Sat Flow(s),veh/h/ln	1728	1777	1803	1728	1777	1790	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.7	13.8	13.9	15.3	11.7	11.9	4.5	15.8	20.1	5.3	21.4	2.9
Cycle Q Clear(g_c), s	9.7	13.8	13.9	15.3	11.7	11.9	4.5	15.8	20.1	5.3	21.4	2.9
Prop In Lane	1.00		0.21	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	384	389	653	492	496	109	1176	524	129	1152	514
V/C Ratio(X)	0.82	0.72	0.73	0.88	0.53	0.53	0.78	0.60	0.73	0.79	0.77	0.20
Avail Cap(c_a), veh/h	692	693	703	802	749	755	131	1435	640	150	1473	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	34.5	34.6	37.4	29.0	29.1	43.9	26.5	28.0	43.3	28.9	10.1
Incr Delay (d2), s/veh	2.2	3.7	3.7	8.3	1.2	1.3	17.7	0.7	3.9	18.3	2.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	6.2	6.3	7.0	5.0	5.1	2.4	6.3	7.8	2.9	8.8	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	38.2	38.3	45.7	30.3	30.3	61.7	27.2	31.8	61.6	31.3	10.3
LnGrp LOS	D	D	D	D	C	C	E	C	C	E	C	B
Approach Vol, veh/h		923			1098			1176			1096	
Approach Delay, s/veh		39.9			38.3			31.2			32.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	36.5	16.1	30.8	10.9	37.1	21.9	25.0
Change Period (Y+Rc), s	5.7	* 5.7	4.0	4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	7.0	* 39	19.0	40.0	8.0	38.3	22.0	37.0
Max Q Clear Time (g_c+I1), s	6.5	23.4	11.7	13.9	7.3	22.1	17.3	15.9
Green Ext Time (p_c), s	0.0	7.3	0.4	4.6	0.0	7.4	0.6	4.6

Intersection Summary	
HCM 6th Ctrl Delay	35.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



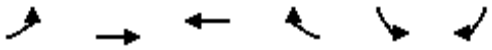
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	826	16	33	933	245	16	41	86	576	55	34
Future Volume (veh/h)	15	826	16	33	933	245	16	41	86	576	55	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	869	6	35	982	242	17	43	4	677	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	898	761	47	1390	342	80	85	55	781	410	0
Arrive On Green	0.01	0.48	0.48	0.03	0.49	0.49	0.05	0.05	0.05	0.22	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	2827	695	1781	1870	1226	3563	1870	0
Grp Volume(v), veh/h	16	869	6	35	616	608	17	43	4	677	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1745	1781	1870	1226	1781	1870	0
Q Serve(g_s), s	0.8	39.3	0.2	1.7	23.5	23.7	0.8	2.0	0.3	16.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	39.3	0.2	1.7	23.5	23.7	0.8	2.0	0.3	16.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	26	898	761	47	873	858	80	85	55	781	410	0
V/C Ratio(X)	0.61	0.97	0.01	0.75	0.71	0.71	0.21	0.51	0.07	0.87	0.00	0.00
Avail Cap(c_a), veh/h	104	901	764	82	873	858	552	579	380	1103	579	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.7	22.0	11.8	42.2	17.2	17.3	40.1	40.7	39.9	32.8	0.0	0.0
Incr Delay (d2), s/veh	8.2	22.6	0.0	8.6	3.3	3.4	0.5	1.8	0.2	4.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	21.0	0.1	0.8	9.5	9.4	0.4	0.9	0.1	7.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	44.6	11.8	50.7	20.5	20.7	40.6	42.4	40.1	36.9	0.0	0.0
LnGrp LOS	D	D	B	D	C	C	D	D	D	D	A	A
Approach Vol, veh/h		891			1259			64			677	
Approach Delay, s/veh		44.5			21.5			41.8			36.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	48.4		23.6	5.8	49.4		8.4				
Change Period (Y+Rc), s	4.5	6.5		4.5	4.5	6.5		4.5				
Max Green Setting (Gmax), s	4.0	42.0		27.0	5.1	40.9		27.0				
Max Q Clear Time (g_c+I1), s	3.7	41.3		18.0	2.8	25.7		4.0				
Green Ext Time (p_c), s	0.0	0.5		1.1	0.0	10.9		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

Notes

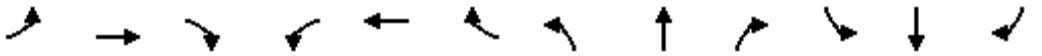
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	1468	1245	23	25	12
Future Volume (veh/h)	8	1468	1245	23	25	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1562	1324	23	27	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	211	1589	1479	1253	80	71
Arrive On Green	0.01	0.85	0.79	0.79	0.04	0.04
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	9	1562	1324	23	27	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	0.1	68.5	45.6	0.3	1.3	0.1
Cycle Q Clear(g_c), s	0.1	68.5	45.6	0.3	1.3	0.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	211	1589	1479	1253	80	71
V/C Ratio(X)	0.04	0.98	0.90	0.02	0.34	0.01
Avail Cap(c_a), veh/h	274	1589	1479	1253	416	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	14.3	6.2	6.7	2.0	41.7	41.1
Incr Delay (d2), s/veh	0.0	9.0	6.7	0.0	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.3	12.4	0.1	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	15.2	13.5	2.0	42.6	41.1
LnGrp LOS	B	B	B	A	D	D
Approach Vol, veh/h		1571	1347		28	
Approach Delay, s/veh		15.2	13.3		42.6	
Approach LOS		B	B		D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	5.3	76.2		8.5		81.5
Change Period (Y+Rc), s	4.5	5.0		4.5		5.0
Max Green Setting (Gmax), s	4.0	51.0		21.0		59.5
Max Q Clear Time (g_c+I1), s	2.1	47.6		3.3		70.5
Green Ext Time (p_c), s	0.0	3.0		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1103	366	132	1029	131	180	153	142	221	282	66
Future Volume (veh/h)	61	1103	366	132	1029	131	180	153	142	221	282	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	1186	289	142	1106	0	194	165	25	238	303	19
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	1558	695	174	1735		262	346	293	310	362	307
Arrive On Green	0.05	0.44	0.44	0.10	0.49	0.00	0.08	0.18	0.18	0.09	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	3456	1870	1585
Grp Volume(v), veh/h	66	1186	289	142	1106	0	194	165	25	238	303	19
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1728	1870	1585
Q Serve(g_s), s	3.5	27.1	8.1	7.5	22.2	0.0	5.3	7.6	1.3	6.5	15.0	0.8
Cycle Q Clear(g_c), s	3.5	27.1	8.1	7.5	22.2	0.0	5.3	7.6	1.3	6.5	15.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	1558	695	174	1735		262	346	293	310	362	307
V/C Ratio(X)	0.78	0.76	0.42	0.82	0.64		0.74	0.48	0.09	0.77	0.84	0.06
Avail Cap(c_a), veh/h	167	1859	829	278	2080		323	457	387	467	535	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	22.8	8.5	42.6	18.3	0.0	43.5	35.0	32.5	42.8	37.3	21.9
Incr Delay (d2), s/veh	5.6	1.8	0.6	4.4	0.6	0.0	4.9	1.5	0.2	1.8	9.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.0	3.8	3.5	8.6	0.0	2.4	3.4	0.5	2.7	7.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	24.6	9.0	47.0	18.9	0.0	48.4	36.5	32.6	44.6	46.4	22.0
LnGrp LOS	D	C	A	D	B		D	D	C	D	D	C
Approach Vol, veh/h		1541			1248	A		384			560	
Approach Delay, s/veh		22.8			22.1			42.3			44.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	47.9	11.8	23.1	8.6	52.7	12.6	22.3
Change Period (Y+Rc), s	4.0	5.7	4.5	* 4.5	4.0	5.7	4.0	4.5
Max Green Setting (Gmax), s	15.0	50.3	9.0	* 28	9.0	56.3	13.0	23.5
Max Q Clear Time (g_c+I1), s	9.5	29.1	7.3	17.0	5.5	24.2	8.5	9.6
Green Ext Time (p_c), s	0.1	13.1	0.1	1.6	0.0	13.3	0.2	1.0

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

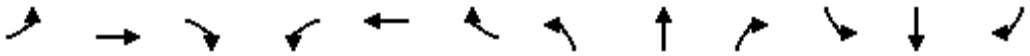
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1103	222	67	1369	584	80
Future Volume (veh/h)	1103	222	67	1369	584	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1149	210	70	1426	608	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2319	424	90	2273	772	354
Arrive On Green	0.53	0.53	0.05	0.64	0.22	0.22
Sat Flow, veh/h	4507	793	1781	3647	3456	1585
Grp Volume(v), veh/h	901	458	70	1426	608	19
Grp Sat Flow(s),veh/h/ln	1702	1728	1781	1777	1728	1585
Q Serve(g_s), s	12.3	12.3	2.8	17.6	12.1	0.7
Cycle Q Clear(g_c), s	12.3	12.3	2.8	17.6	12.1	0.7
Prop In Lane		0.46	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1819	923	90	2273	772	354
V/C Ratio(X)	0.50	0.50	0.78	0.63	0.79	0.05
Avail Cap(c_a), veh/h	2748	1395	293	3647	1655	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	10.8	34.3	7.9	26.7	22.3
Incr Delay (d2), s/veh	0.3	0.5	5.4	0.5	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	3.9	1.3	4.9	4.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.0	11.3	39.7	8.4	28.6	22.4
LnGrp LOS	B	B	D	A	C	C
Approach Vol, veh/h	1359			1496	627	
Approach Delay, s/veh	11.1			9.9	28.4	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	7.7	44.1		21.3		51.7
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	12.0	59.0		35.0		75.0
Max Q Clear Time (g_c+I1), s	4.8	14.3		14.1		19.6
Green Ext Time (p_c), s	0.0	14.9		2.2		27.1

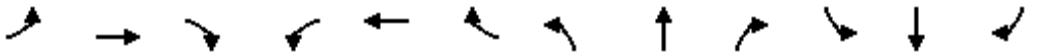
Intersection Summary		
HCM 6th Ctrl Delay		13.7
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	686	217	188	1029	54	267	285	205	76	313	205
Future Volume (veh/h)	206	686	217	188	1029	54	267	285	205	76	313	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	722	185	198	1083	18	281	300	63	80	329	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	1369	347	226	1162	518	307	1037	462	102	451	163
Arrive On Green	0.14	0.34	0.34	0.13	0.33	0.33	0.17	0.29	0.29	0.06	0.18	0.18
Sat Flow, veh/h	1781	4061	1028	1781	3554	1585	1781	3554	1585	1781	2557	924
Grp Volume(v), veh/h	217	604	303	198	1083	18	281	300	63	80	227	223
Grp Sat Flow(s),veh/h/ln	1781	1702	1685	1781	1777	1585	1781	1777	1585	1781	1777	1704
Q Serve(g_s), s	13.7	16.4	16.7	12.5	33.9	0.9	17.8	7.5	3.4	5.1	13.8	14.3
Cycle Q Clear(g_c), s	13.7	16.4	16.7	12.5	33.9	0.9	17.8	7.5	3.4	5.1	13.8	14.3
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	244	1147	568	226	1162	518	307	1037	462	102	313	301
V/C Ratio(X)	0.89	0.53	0.53	0.88	0.93	0.03	0.91	0.29	0.14	0.79	0.72	0.74
Avail Cap(c_a), veh/h	248	1147	568	279	1176	525	310	1331	594	186	542	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	30.7	30.8	49.2	37.4	26.3	46.7	31.5	30.0	53.4	44.6	44.8
Incr Delay (d2), s/veh	28.8	0.7	1.5	19.4	13.4	0.0	29.4	0.3	0.2	5.0	5.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	6.6	6.8	6.7	16.3	0.3	10.3	3.2	1.3	2.4	6.5	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	31.4	32.3	68.7	50.8	26.4	76.1	31.7	30.2	58.4	50.0	50.9
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h		1124			1299			644			530	
Approach Delay, s/veh		40.5			53.2			50.9			51.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	44.7	24.8	25.8	20.7	43.5	11.6	39.0
Change Period (Y+Rc), s	5.0	6.0	5.0	5.5	5.0	6.0	5.0	5.5
Max Green Setting (Gmax), s	18.0	36.0	20.0	35.0	16.0	38.0	12.0	43.0
Max Q Clear Time (g_c+I1), s	14.5	18.7	19.8	16.3	15.7	35.9	7.1	9.5
Green Ext Time (p_c), s	0.1	8.1	0.0	4.0	0.0	1.7	0.0	3.7

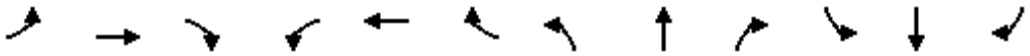
Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	4	112	30	7	38	95	635	5	23	635	148
Future Volume (veh/h)	122	4	112	30	7	38	95	635	5	23	635	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	4	27	33	8	6	104	698	5	25	698	148
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	256	228	406	294	196	355	1058	8	460	854	181
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1400	1777	1585	1378	2041	1361	651	1855	13	744	1496	317
Grp Volume(v), veh/h	134	4	27	33	7	7	104	0	703	25	0	846
Grp Sat Flow(s),veh/h/ln	1400	1777	1585	1378	1777	1625	651	0	1868	744	0	1813
Q Serve(g_s), s	2.9	0.1	0.5	0.7	0.1	0.1	4.8	0.0	8.2	0.8	0.0	11.8
Cycle Q Clear(g_c), s	3.0	0.1	0.5	1.1	0.1	0.1	16.7	0.0	8.2	8.9	0.0	11.8
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.17
Lane Grp Cap(c), veh/h	425	256	228	406	256	234	355	0	1066	460	0	1035
V/C Ratio(X)	0.32	0.02	0.12	0.08	0.03	0.03	0.29	0.00	0.66	0.05	0.00	0.82
Avail Cap(c_a), veh/h	1022	1014	904	994	1014	927	355	0	1066	460	0	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	11.6	11.8	12.3	11.6	11.6	12.2	0.0	4.7	7.7	0.0	5.5
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.1	0.0	0.1	2.1	0.0	3.2	0.2	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.1	0.2	0.0	0.0	0.7	0.0	1.7	0.1	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	11.6	12.0	12.3	11.6	11.7	14.2	0.0	7.9	8.0	0.0	12.6
LnGrp LOS	B	B	B	B	B	B	B	A	A	A	A	B
Approach Vol, veh/h		165			47			807			871	
Approach Delay, s/veh		13.1			12.1			8.7			12.5	
Approach LOS		B			B			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		9.0		22.5		9.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		18.7		5.0		13.8		3.1				
Green Ext Time (p_c), s		0.0		0.4		2.2		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									



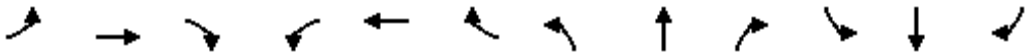
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	122	0	122	0	231	86	106	171	0
Future Volume (veh/h)	0	0	0	122	0	122	0	231	86	106	171	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	0	0	0	157	0	58	0	246	39	113	182	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	0
Cap, veh/h	0	598	0	305	0	769	128	1086	169	453	664	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.49	0.00	0.36	0.36	0.36	0.36	0.00
Sat Flow, veh/h	0	1870	0	3563	0	1585	1202	3059	477	1094	1870	0
Grp Volume(v), veh/h	0	0	0	157	0	58	0	141	144	113	182	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1585	1202	1777	1759	1094	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	1.1	0.0	3.1	3.2	4.6	3.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	0.0	1.1	0.0	3.1	3.2	7.8	3.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	0	598	0	305	0	769	128	631	625	453	664	0
V/C Ratio(X)	0.00	0.00	0.00	0.51	0.00	0.08	0.00	0.22	0.23	0.25	0.27	0.00
Avail Cap(c_a), veh/h	0	598	0	1170	0	886	128	631	625	453	664	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.6	0.0	7.7	0.0	12.7	12.8	15.5	13.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.8	0.9	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.0	0.0	0.3	0.0	1.2	1.2	1.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	26.0	0.0	7.8	0.0	13.5	13.6	15.8	13.2	0.0
LnGrp LOS	A	A	A	C	A	A	A	B	B	B	B	A
Approach Vol, veh/h		0			215			285			295	
Approach Delay, s/veh		0.0			21.1			13.6			14.2	
Approach LOS					C			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.5	9.3	22.5		24.5	0.0	31.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.0	18.5	18.0		20.0	5.0	31.5				
Max Q Clear Time (g_c+I1), s		5.2	4.4	0.0		9.8	0.0	3.1				
Green Ext Time (p_c), s		1.3	0.4	0.0		1.0	0.0	0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



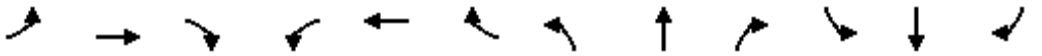
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	540	168	63	442	14	7	10	68	221	12	80
Future Volume (veh/h)	85	540	168	63	442	14	7	10	68	221	12	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	568	121	66	465	-30	7	11	71	233	13	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	345	1051	223	329	1249	0	466	74	480	469	84	471
Arrive On Green	0.19	0.36	0.36	0.18	0.35	0.00	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	2916	619	1781	3647	0	1311	217	1401	1316	245	1377
Grp Volume(v), veh/h	89	345	344	66	435	0	7	0	82	233	0	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1759	1781	1777	0	1311	0	1618	1316	0	1622
Q Serve(g_s), s	4.7	17.1	17.2	3.5	10.0	0.0	0.4	0.0	3.9	16.5	0.0	4.1
Cycle Q Clear(g_c), s	4.7	17.1	17.2	3.5	10.0	0.0	4.5	0.0	3.9	20.4	0.0	4.1
Prop In Lane	1.00		0.35	1.00		0.00	1.00		0.87	1.00		0.85
Lane Grp Cap(c), veh/h	345	640	634	329	1249	0	466	0	554	469	0	555
V/C Ratio(X)	0.26	0.54	0.54	0.20	0.35	0.00	0.02	0.00	0.15	0.50	0.00	0.15
Avail Cap(c_a), veh/h	345	640	634	329	1249	0	466	0	554	469	0	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	28.2	28.2	38.3	26.6	0.0	26.9	0.0	25.3	32.4	0.0	25.3
Incr Delay (d2), s/veh	1.8	3.2	3.3	1.4	0.8	0.0	0.1	0.0	0.6	3.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.7	7.7	1.6	4.3	0.0	0.1	0.0	1.6	5.7	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	31.4	31.5	39.7	27.4	0.0	27.0	0.0	25.8	36.1	0.0	25.9
LnGrp LOS	D	C	C	D	C	A	C	A	C	D	A	C
Approach Vol, veh/h		778			501			89			319	
Approach Delay, s/veh		32.4			29.0			25.9			33.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	44.0		42.0	24.0	45.0		42.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	* 5		4.0				
Max Green Setting (Gmax), s	21.5	38.0		38.0	20.5	* 40		38.0				
Max Q Clear Time (g_c+I1), s	6.7	12.0		22.4	5.5	19.2		6.5				
Green Ext Time (p_c), s	0.2	2.9		1.1	0.1	4.2		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		31.2
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	581	0	299	0	0	0	169	559	0	5	929	536
Future Volume (veh/h)	581	0	299	0	0	0	169	559	0	5	929	536
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	605	0	140	0	0	0	176	582	-70	5	968	558
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	706	0	495	0	2	0	203	2395	0	9	2008	1210
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.00	0.11	0.67	0.00	0.01	0.57	0.57
Sat Flow, veh/h	3563	0	1585	0	1870	0	1781	3647	0	1781	3554	1585
Grp Volume(v), veh/h	605	0	140	0	0	0	176	512	0	5	968	558
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	1870	0	1781	1777	0	1781	1777	1585
Q Serve(g_s), s	20.0	0.0	8.1	0.0	0.0	0.0	11.9	6.7	0.0	0.3	19.9	15.7
Cycle Q Clear(g_c), s	20.0	0.0	8.1	0.0	0.0	0.0	11.9	6.7	0.0	0.3	19.9	15.7
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	706	0	495	0	2	0	203	2395	0	9	2008	1210
V/C Ratio(X)	0.86	0.00	0.28	0.00	0.00	0.00	0.87	0.21	0.00	0.55	0.48	0.46
Avail Cap(c_a), veh/h	964	0	609	0	84	0	307	2395	0	80	2008	1210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.00	0.80	0.00	0.00	0.00	0.87	0.87	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	31.7	0.0	0.0	0.0	53.1	7.6	0.0	60.5	15.9	5.3
Incr Delay (d2), s/veh	4.8	0.0	0.2	0.0	0.0	0.0	9.4	0.2	0.0	17.7	0.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	0.0	3.2	0.0	0.0	0.0	5.7	2.3	0.0	0.2	7.7	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	0.0	31.9	0.0	0.0	0.0	62.6	7.8	0.0	78.3	16.7	6.5
LnGrp LOS	D	A	C	A	A	A	E	A	A	E	B	A
Approach Vol, veh/h		745			0			688			1531	
Approach Delay, s/veh		48.2			0.0			21.8			13.2	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	88.2		29.2	17.9	74.9		0.0				
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		4.0				
Max Green Setting (Gmax), s	5.5	59.0		33.0	21.0	43.5		5.5				
Max Q Clear Time (g_c+I1), s	2.3	8.7		22.0	13.9	21.9		0.0				
Green Ext Time (p_c), s	0.0	6.0		2.2	0.1	13.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.0	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX C – UPDATED CAPCOA RESEARCH ON TDM STRATEGIES

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
Land Use/Location	3.1.1	LUT-1 Increase Density	0.8% - 30% VMT reduction due to increase in density	Adequate	Increasing residential density is associated with lower VMT per capita. Increased residential density in areas with high jobs access may have a greater VMT change than increases in regions with lower jobs access. The range of reductions is based on a range of elasticities from -0.04 to -0.22. The low end of the reductions represents a -0.04 elasticity of demand in response to a 10% increase in residential units or employment density and a -0.22 elasticity in response to 50% increase to residential/employment density.	0.4% -10.75%	Primary sources: Boarnet, M. and Handy, S. (2014). Impacts of Residential Density on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm Secondary source: Stevens, M. (2017). Does Compact Development Make People Drive Less? Journal of the American Planning Association, 83(1), 7-18.
Land Use/Location	3.1.9	LUT-9 Improve Design of Development	3.0% - 21.3% reduction in VMT due to increasing intersection density vs. typical ITE suburban development	Adequate	No update to CAPCOA literature; advise applying CAPCOA measure only to large developments with significant internal street structure.	Same	N/A
Land Use/Location	3.1.4	LUT-4 Increase Destination Accessibility	6.7%-20% VMT reduction due to decrease in distance to major job center or downtown	Adequate	Reduction in VMT due to increased regional accessibility (jobs gravity). Locating new development in areas with good access to destinations reduces VMT by reducing trip lengths and making walking, biking, and transit trips more feasible. Destination accessibility is measured in terms of the number of jobs (or other attractions) reachable within a given travel time, which tends to be highest at central locations and lowest at peripheral ones.	0.5%-12%	Primary sources: Handy, S. et al. (2014). Impacts of Network Connectivity on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm Handy, S. et al. (2013). Impacts of Regional Accessibility on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm Secondary source: Holtzclaw, et al. (2002.) Location Efficiency: Neighborhood and Socioeconomic Characteristics Determine Auto Ownership and Use – Studies in Chicago, Los Angeles, and Chicago. Transportation Planning and Technology, Vol. 25, pp. 1–27.
Land Use/ Location	3.1.3	LUT-3 Increase Diversity of Urban and Suburban Developments	9%-30% VMT reduction due to mixing land uses within a single development	Adequate	1] VMT reduction due to mix of land uses within a single development. Mixing land uses within a single development can decrease VMT (and resulting GHG emissions), since building users do not need to drive to meet all their needs. 2] Reduction in VMT due to regional change in entropy index of diversity. Providing a mix of land uses within a single neighborhood can decrease VMT (and resulting GHG emissions), since trips between land use types are shorter and may be accommodated by non-auto modes of transport. For example, when residential areas are in the same neighborhood as retail	1] 0%-12% 2] 0.3%-4%	1] Ewing, R. and Cervero, R. (2010). Travel and the Built Environment - A Meta-Analysis. Journal of the American Planning Association,76(3),265-294. Cited in California Air Pollution Control Officers Association. (2010). Quantifying Greenhouse Gas Mitigation Measures. Retrieved from: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf Frank, L., Greenwald, M., Kavage, S. and Devlin, A. (2011). An Assessment of Urban Form and Pedestrian and Transit Improvements as an Integrated GHG Reduction Strategy. WSDOT Research Report WA-RD 765.1. Washington State Department of Transportation. Retrieved from: http://www.wsdot.wa.gov/research/reports/fullreports/765.1.pdf Nasri, A. and Zhang, L. (2012). Impact of Metropolitan-Level Built Environment on Travel Behavior. Transportation Research Record: Journal of the Transportation Research

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
					and office buildings, a resident does not need to travel outside of the neighborhood to meet his/her trip needs. At the regional level, reductions in VMT are measured in response to changes in the entropy index of land use diversity.		Board, 2323(1), 75-79. Sadek, A. et al. (2011). Reducing VMT through Smart Land-Use Design. New York State Energy Research and Development Authority. Retrieved from: https://www.dot.ny.gov/divisions/engineering/technical- services/trans-r-and-d-repository/C-08-29%20Final%20Report_December%202011%20%282%29.pdf Spears, S.et al. (2014). Impacts of Land-Use Mix on Passenger Vehicle Use and Greenhouse Gas Emissions- Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm 2] Zhang, Wengia et al. "Short- and Long-Term Effects of Land Use on Reducing Personal Vehicle Miles of Travel."
Land Use/ Location	3.1.5	LUT-5 Increase Transit Accessibility	0.5%-24.6% reduce in VMT due to locating a project near high-quality transit	Adequate	1] VMT reduction when transit station is provided within 1/2 mile of development (compared to VMT for sites located outside 1/2-mile radius of transit). Locating high density development within 1/2 mile of transit will facilitate the use of transit by people traveling to or from the Project site. The use of transit results in a mode shift and therefore reduced VMT. 2] Reduction in vehicle trips due to implementing TOD. A project with a residential/commercial center designed around a rail or bus station, is called a transit- oriented development (TOD). The project description should include, at a minimum, the following design features: • A transit station/stop with high-quality, high-frequency bus service located within a 5- 10-minute walk (or roughly ¼ mile from stop to edge of development), and/or • A rail station located within a 20-minute walk (or roughly ½ mile from station to edge of development) • Fast, frequent, and reliable transit service connecting to a high percentage of regional destinations • Neighborhood designed for walking and cycling	1] 0%-5.8% 2] 0%-7.3%	1] Lund, H. et al. (2004). Travel Characteristics of Transit-Oriented Development in California. Oakland, CA: Bay Area Rapid Transit District, Metropolitan Transportation Commission, and Caltrans. Tal, G. et al. (2013). Policy Brief on the Impacts of Transit Access (Distance to Transit) Based on a Review of the Empirical Literature. California Air Resources Board. Retrieved from: https://www.arb.ca.gov/cc/sb375/policies/transitaccess/transit_access_brief120313.pdf 2] Zamir, K. R. et al. (2014). Effects of Transit-Oriented Development on Trip Generation, Distribution, and Mode Share in Washington, D.C., and Baltimore, Maryland. Transportation Research Record: Journal of the Transportation Research Board. 2413, 45–53. DOI: 10.3141/2413-05
Land Use/ Location	3.1.6	LUT-6 Integrate Affordable and Below Market Rate Housing	0.04%-1.20% reduction in VMT for making up to 30% of housing units BMR	Weak - Should only be used where supported by local data on affordable housing trip generation.	Observed trip generation indicates substantial local and regional variation in trip making behavior at affordable housing sites. Recommend use of ITE rates or local data for senior housing.	N/A	"Draft Memorandum: Infill and Complete Streets Study, Task 2.1: Local Trip Generation Study." Measuring the Miles: Developing new metrics for vehicle travel in LA. City of Los Angeles, April 19, 2017.

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
Neighborhood Site Enhancements	3.2.1	SDT-1 Provide Pedestrian Network Improvements	0%-2% reduction in VMT for creating a connected pedestrian network within the development and connecting to nearby destinations.	Adequate for large area projects only such as a specific plan.	VMT reduction due to provision of complete pedestrian networks. Only applies if located in an area that may be prone to having a less robust sidewalk network.	0.5%-5.7%	Handy, S. et al. (2014). Impacts of Pedestrian Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm All studies cited here focus on metropolitan regions as a whole, or on the urban core or suburban areas within those regions.
Neighborhood Site Enhancements	3.2.2	SDT-2 Provide Traffic Calming Measures	0.25%-1% VMT reduction due to traffic calming on streets within and around the development	Adequate for large area projects only such as a specific plan.	Reduction in VMT due to expansion of bike networks in urban areas. Strategy only applies to bicycle facilities that provide a dedicated lane for bicyclists or a completely separated right-of-way for bicycles and pedestrians. Project-level definition: Enhance bicycle network citywide (or at similar scale), such that a building entrance or bicycle parking is within 200 yards walking or bicycling distance from a bicycle network that connects to at least one of the following: at least 10 diverse uses; a school or employment center, if the project total floor area is 50% or more residential; or a bus rapid transit stop, light or heavy rail station, commuter rail station, or ferry terminal. All destinations must be 3-mile bicycling distance from project site. Include educational campaigns to encourage bicycling.	0%-1.7%	Zahabi, S. et al. (2016). Exploring the link between the neighborhood typologies, bicycle infrastructure and commuting cycling over time and the potential impact on commuter GHG emissions. Transportation Research Part D: Transport and Environment. 47, 89-103. For this purpose, automobile and bicycle trip information from origin–destination surveys for the years 1998, 2003 and 2008 are used. Neighborhood typologies are generated from different built environment indicators (population and employment density, land use diversity, etc.).
Neighborhood Site Enhancements	3.2.3	SDT-3 Implement an NEV Network	0.5%-12.7% VMT reduction for GHG- emitting vehicles, depending on level of local NEV penetration	Weak - not recommended without supplemental data.	Limited evidence and highly limited applicability. Use with supplemental data only.	N/A	City of Lincoln, MHM Engineers & Surveyors, Neighborhood Electric Vehicle Transportation Program Final Report, issued 04/05/05, and City of Lincoln, A Report to the California Legislature as required by Assembly Bill 2353, Neighborhood Electric Vehicle Transportation Plan Evaluation, January 1, 2008. Cited in California Air Pollution Control Officers Association. (2010). Quantifying Greenhouse Gas Mitigation Measures. Retrieved from: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA- Quantification-Report-9-14-Final.pdf

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
Neighborhood Site Enhancements	3.4.9	TRT-9 Implement Car-Sharing Program	0.4% - 0.7% VMT reduction due to lower vehicle ownership rates and general shift to non-driving modes	Adequate	Vehicle trip reduction due to car-sharing programs; reduction assumes 1%-5% penetration rate. Implementing car-sharing programs allows people to have on-demand access to a shared fleet of vehicles on an as- needed basis, as a supplement to trips made by non-SOV modes. Transit station-based programs focus on providing the "last-mile" solution and link transit with commuters' final destinations. Residential-based programs work to substitute entire household-based trips. Employer-based programs provide a means for business/day trips for alternative mode commuters and provide a guaranteed ride home option. The reduction shown here assumes a 1%-5% penetration rate.	0.3%-1.6%	Lovejoy, K. et al. (2013). Impacts of Carsharing on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Parking Pricing	3.3.1	PDT-1 Limit Parking Supply	5%-12.5% VMT reduction in response to reduced parking supply vs. ITE parking generation rate	Weak - not recommended. Fehr & Peers has developed new estimates for residential land use only that may be used.	CAPCOA reduction range derived from estimate of reduced vehicle ownership, not supported by observed trip or VMT reductions. Evidence is available for mode shift due to presence/absence of parking in high-transit urban areas; additional investigation required.	Depends on project type and size	Fehr & Peers estimated a linear regression formula based on observed data from multiple locations. Resulting equation produces maximum VMT reductions for residential land use only of 30% in suburban locations and 50% in urban locations based on parking supply percentage reductions.
Parking Pricing	3.3.2	PDT-2 Unbundle Parking Costs from Property Cost	2.6% -13% VMT reduction due to decreased vehicle ownership rates	Adequate - conditional on the agency not requiring parking minimums and pricing/managing on-street parking (i.e., residential parking permit districts, etc.).	Reduction in VMT, primarily for residential uses, based on range of elasticities for vehicle ownership in response to increased residential parking fees. Does not account for self-selection. Only applies if the city does not require parking minimums and if on- street parking is priced and managed (i.e., residential parking permit districts).	2%-12%	Victoria Transport Policy Institute (2009). Parking Requirement Impacts on Housing Affordability. Retrieved March 2010 from: http://www.vtpi.org/park-hou.pdf.
Parking Pricing	3.3.3	PDT-3 Implement Market Price Public Parking	2.8%-5.5% VMT reduction due to "park once" behavior and disincentive to driving	Adequate for large area projects only such as a specific plan.	Implement a pricing strategy for parking by pricing all central business district/employment center/retail center on- street parking. It will be priced to encourage park once" behavior. The benefit of this measure above that of paid parking at the project only is that it deters parking spillover from project supplied parking to other public parking nearby, which undermine the vehicle miles traveled (VMT) benefits of project pricing. It may also generate sufficient area- wide mode shifts to justify increased transit service to the area. VMT reduction applies to VMT from visitor/customer trips only. Reductions	2.8%-14.5%	Clinch, J.P. and Kelly, J.A. (2003). Temporal Variance of Revealed Preference On-Street Parking Price Elasticity. Dublin: Department of Environmental Studies, University College Dublin. Retrieved from: http://www.ucd.ie/gpep/research/workingpapers/2004/04-02.pdf. Cited in Victoria Transport Policy Institute (2017). Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior. Retrieved from: http://www.vtpi.org/tdm/tdm11.htm Hensher, D. and King, J. (2001). Parking Demand and Responsiveness to Supply, Price and Location in Sydney Central Business District. Transportation Research A. 35(3), 177-196. Millard-Ball, A. et al. (2013). Is the curb 80% full or 20% empty? Assessing the impacts of San Francisco's parking pricing experiment. Transportation Research Part A. 63(2014), 76-92. Shoup, D. (2011). The High Cost of Free Parking. APA Planners Press. p. 290. Cited in Pierce, G. and Shoup, D. (2013). Getting the Prices Right. Journal of the American

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
					higher than top end of range from CAPCOA report apply only in conditions with highly constrained on-street parking supply and lack of comparably priced off-street parking.		Planning Association. 79(1), 67-81.
Transit System	3.5.3	TST-3 Expand Transit Network	0.1-8.2% VMT reduction in response to increase in transit network coverage	Adequate for large area projects only such as a specific plan.	Reduction in vehicle trips due to increased transit service hours or coverage. Low end of reduction is typical of project-level implementation (payment of impact fees and/or localized improvements).	0.1%-10.5%	Handy, S. et al. (2013). Impacts of Transit Service Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Transit System	3.5.4	TST-4 Increase Transit Service Frequency/Speed	0.02%-2.5% VMT reduction due to reduced headways and increased speed and reliability	Adequate for large area projects only such as a specific plan.	Reduction in vehicle trips due to increased transit frequency/decreased headway. Low end of reduction is typical of project-level implementation (payment of impact fees and/or localized improvements).	0.3%-6.3%	Handy, S. et al. (2013). Impacts of Transit Service Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Transit System	3.5.1	TST-1 Provide a Bus Rapid Transit System	0.02%-3.2% VMT reduction by converting standard bus system to BRT system	Adequate for large area projects only such as a specific plan.	No new information identified.	Same	N/A
Commute Trip Reduction	3.4.1	TRT-1 Implement CTR Program - Voluntary	1.0%-6.2% commute VMT reduction due to employer-based mode shift program	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-2 Implement CTR Program - Required Implementation/Monitoring" or with CAPCOA strategies TRT-3.4.3 through TRT-3.4.9.	Reduction in vehicle trips in response to employer led TDM programs. The CTR program should include all of the following to apply the effectiveness reported by the literature: • Carpooling encouragement • Ride-matching assistance • Preferential carpool parking • Flexible work schedules for carpools • Half time transportation coordinator • Vanpool assistance • Bicycle end-trip facilities (parking, showers and lockers)	1.0%-6.0%	Boarnet, M. et al. (2014). Impacts of Employer-Based Trip Reduction Programs and Vanpools on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Commute Trip Reduction	3.4.2	TRT-2 Implement CTR Program - Required Implementation/Monitoring	4.2%-21.0% commute VMT reduction due to employer-based mode shift program with required monitoring and reporting	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-1 Implement CTR Program - Voluntary" or with CAPCOA strategies TRT-3.4.3 through TRT-	Limited evidence available. Anecdotal evidence shows high investment produces high VMT/vehicle trip reductions at employment sites with monitoring requirements and specific targets.	Same	Nelson/Nygaard (2008). South San Francisco Mode Share and Parking Report for Genentech, Inc. (p. 8) Cited in: California Air Pollution Control Officers Association. (2010). Quantifying Greenhouse Gas Mitigation Measures. Retrieved from: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA- Quantification-Report-9-14-Final.pdf

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
				3.4.9.			
Commute Trip Reduction	3.4.4	TRT-4 Implement Subsidized or Discounted Transit Program	0.3%-20% commute VMT reduction due to transit subsidy of up to $6/day	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-1 Implement CTR Program - Voluntary" or "TRT-2 Implement CTR Program - Required Implementation/Monitoring."	1] Reduction in vehicle trips in response to reduced cost of transit use, assuming that 10- 50% of new bus trips replace vehicle trips 2] Reduction in commute trip VMT due to employee benefits that include transit 3] Reduction in all vehicle trips due to reduced transit fares system-wide, assuming 25% of new transit trips would have been vehicle trips.	1] 0.3%-14% 2] 0-16% 3] 0.1% to 6.9%	1] Victoria Transport Policy Institute. (2017). Understanding Transport Demands and Elasticities. Online TDM Encyclopedia. Retrieved from: http://www.vtpi.org/tdm/tdm11.htm 2] Carolina, P. et al. (2016). Do Employee Commuter Benefits Increase Transit Ridership? Evidence from the NY-NJ Region. Washington, DC: Transportation Research Board, 96th Annual Meeting. 3] Handy, S. et al. (2013). Impacts of Transit Service Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Commute Trip Reduction	3.4.15	TRT-15 Employee Parking Cash-Out	0.6%-7.7% commute VMT reduction due to implementing employee parking cash out	Weak - Effectiveness is building/tenant specific. Research data is over 10 years old (1997).	Shoup case studies indicate a reduction in commute vehicle trips due to implementing cash-out without implementing other trip- reduction strategies.	3%-7.7%	Shoup, D. (1997). Evaluating the Effects of Cashing Out Employer-Paid Parking: Eight Case Studies. Transport Policy. California Air Resources Board. Retrieved from: https://www.arb.ca.gov/research/apr/past/93-308a.pdf. This citation was listed as an alternative literature in CAPCOA.
Commute Trip Reduction	3.4.14	TRT-14 Price Workplace Parking	0.1%-19.7% commute VMT reduction due to mode shift	Adequate - Effectiveness is building/tenant specific.	Reduction in commute vehicle trips due to priced workplace parking; effectiveness depends on availability of alternative modes. Workplace parking pricing may include explicitly charging for parking, implementing above market rate pricing, validating parking only for invited guests, not providing employee parking and transportation allowances, and educating employees about available alternatives.	0.5%-14%	Primary sources: Concas, S. and Nayak, N. (2012), A Meta-Analysis of Parking Price Elasticity. Washington, DC: Transportation Research Board, 2012 Annual Meeting. Dale, S. et al. (2016). Evaluating the Impact of a Workplace Parking Levy on Local Traffic Congestion: The Case of Nottingham UK. Washington, DC: Transportation Research Board, 96th Annual Meeting. Secondary sources: Victoria Transport Policy Institute. (2017). Understanding Transport Demands and Elasticities. Online TDM Encyclopedia. Retrieved from: http://www.vtpi.org/tdm/tdm11.htm Spears, S. et al. (2014). Impacts of Parking Pricing on Passenger Vehicle Use and Greenhouse Gas Emissions - Policy Brief and Technical Background Document. California Air Resources Board. Retrieved from: https://arb.ca.gov/cc/sb375/policies/policies.htm
Commute Trip Reduction	3.4.6	TRT-6 Encourage Telecommuting and Alternative Work Schedules	0.07%-5.5% commute VMT reduction due to reduced commute trips	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-1 Implement CTR Program - Voluntary" or "TRT-2 Implement CTR Program - Required Implementation/Monit	VMT reduction due to adoption of telecommuting. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks.	0.2%-4.5%	Handy, S. et al. (2013). Policy Brief on the Impacts of Telecommuting Based on a Review of the Empirical Literature. California Air Resources Board. Retrieved from: https://www.arb.ca.gov/cc/sb375/policies/telecommuting/telecommuting_brief120313.pdf

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				oring."			
Commute Trip Reduction	3.4.7	1] TRT-7 Implement CTR Marketing 2] Launch Targeted Behavioral Interventions	0.8%-4.0% commute VMT reduction due to employer marketing of alternatives	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-1 Implement CTR Program - Voluntary" or "TRT-2 Implement CTR Program - Required Implementation/Monitoring."	1] Vehicle trips reduction due to CTR marketing 2] Reduction in VMT from institutional trips due to targeted behavioral intervention programs	1] 0.9% to 26% 2] 1%-6%	1] Pratt, Dick. Personal communication regarding the Draft of TCRP 95 Traveler Response to Transportation System Changes – Chapter 19 Employer and Institutional TDM Strategies. Transit Cooperative Research Program. Cited in California Air Pollution Control Officers Association. (2010). Quantifying Greenhouse Gas Mitigation Measures. Retrieved from: http://www.capcoa.org/wp- content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf Dill, J. and Mohr, C. (2010). Long-Term Evaluation of Individualized Marketing Programs for Travel Demand Management. Portland, OR: Transportation Research and Education Center (TREC). Retrieved from: http://pdxscholar.library.pdx.edu/usp_fac 2] Brown, A. and Ralph, K. (2017.) "The Right Time and Place to Change Travel Behavior: An Experimental Study." Washington, DC: Transportation Research Board, 2017 Annual Meeting. Retrieved from: https://trid.trb.org/view.aspx?id=1437253
Commute Trip Reduction	3.4.11	TRT-11 Provide Employer-Sponsored Vanpool/Shuttle	0.3%-13.4% commute VMT reduction due to employer-sponsored vanpool and/or shuttle service	Adequate - Effectiveness is building/tenant specific.	1] Reduction in commute vehicle trips due to implementing employer-sponsored vanpool and shuttle programs 2] Reduction in commute vehicle trips due to vanpool incentive programs 3] Reduction in commute vehicle trips due to employer shuttle programs	1] 0.5%-5.0% 2] 0.3%-7.4% 3] 1.4%-6.8%	1] Concas, Sisinnio, Winters, Philip, Wambalaba, Francis, (2005). Fare Pricing Elasticity, Subsidies, and Demand for Vanpool Services. Transportation Research Record: Journal of the Transportation Research Board, 1924, pp 215-223. 2] Victoria Transport Policy Institute. (2015). Ridesharing: Carpooling and Vanpooling. Online TDM Encyclopedia. Retrieved from: http://vtpi.org/tdm/tdm34.htm 3] ICF. (2014). GHG Impacts for Commuter Shuttles Pilot Program.
Commute Trip Reduction	3.4.3	TRT-3 Provide Ride-Sharing Programs	1%-15% commute VMT reduction due to employer ride share coordination and facilities	Adequate - Effectiveness is building/tenant specific. Do not use with "TRT-1 Implement CTR Program - Voluntary" or "TRT-2 Implement CTR Program - Required Implementation/Monitoring."	Commute vehicle trips reduction due to employer ride-sharing programs. Promote ride-sharing programs through a multi- faceted approach such as: • Designating a certain percentage of parking spaces for ride sharing vehicles • Designating adequate passenger loading and unloading and waiting areas for ride- sharing vehicles Providing an app or website for coordinating rides	2.5%-8.3%	Victoria Transport Policy Institute. (2015). Ridesharing: Carpooling and Vanpooling. Online TDM Encyclopedia. Retrieved from: http://vtpi.org/tdm/tdm34.htm
Commute Trip Reduction	3.4.10	TRT-10 Implement a School Pool Program	7.2%-15.8% reduction in school VMT due to school pool implementation	Adequate for large area projects only such as a specific plan. Only applies to School VMT.	Limited new evidence available, not conclusive	Same	Transportation Demand Management Institute of the Association for Commuter Transportation. TDM Case Studies and Commuter Testimonials. Prepared for the US EPA. 1997. (p. 10, 36-38) WayToGo 2015 Annual Report. Accessed on March 12, 2017 from http://www.waytogo.org/sites/default/files/attachments/waytogo-annual-report-2015.pdf
Commute Trip Reduction	3.4.13	TRT-13 Implement School Bus Program	38%-63% reduction in school VMT due to school bus	Adequate for large area projects only such as a specific plan. Only applies to School VMT.	VMT reduction for school trips based on data beyond a single school district.	5%-30%	Wilson, E., et al. (2007). The implications of school choice on travel behavior and environmental emissions. Transportation Research Part D: Transport and Environment 12(2007), 506-518.

CAPCOA Information					New Information Since CAPCOA Was Published in 2010		
Category	**Strategy #**	**Strategy Title**	**VMT Reduction**	**Strength of Substantial Evidence for CEQA Impact Analysis?**	**New information**	**VMT Reduction**	**Literature or Evidence Cited**
			service implementation		School district boundaries are also a factor to consider. VMT reduction does not appear to be a factor that was considered in a select review of CA boundaries. VMT reductions apply to school trip VMT only.		
Not Applicable - not a CAPCOA strategy	Not Applicable - not a CAPCOA strategy	Not Applicable - not a CAPCOA strategy	Not Applicable - not a CAPCOA strategy	Not Applicable - not a CAPCOA strategy	Bikeshare car trip substitution rate of 7-19% based on data from Washington DC, and Minneapolis/St. Paul. Annual VMT reduction of 151,000 and 57,000, respectively. Includes VMT for rebalancing and maintenance. VMT reduction of 0.023 miles per day per bikeshare member estimated for Bay Area bikeshare, utilizing Minneapolis/St. Paul data	57,000-151,000 annual VMT reduction, based on two large US cities. VMT reduction of 0.023 miles per day per member, based on one large US city estimate.	Fishman, E., Washington, S., & Haworth, N. (2014). Bike share's impact on car use: Evidence from the United States, Great Britain, and Australia. Transportation Research Part D: Transport and Environment, 31, 13-20. TDM Methodology: Impact of Carsharing Membership, Transit Passes, Bikesharing Membership, Unbundled Parking, and Parking Supply Reductions on Driving. Center for Neighborhood Technology, Peter Haas and Cindy Copp, with TransForm staff, May 5, 2016.

APPENDIX G

AB 52 Tribal Consultation Request Letters

May 12, 2021

Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA, 91778

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Morales:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles, as shown in Figure 1. The General Plan Planning Area (Planning Area) is the land area addressed by the City of Rolling Hills Estates (City) General Plan Update (Proposed Project), which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent) and the unincorporated Sphere of Influence (SOI) (16 percent). As shown in Figure 2, the boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

The Rolling Hills Estates General Plan is a guidance document that describes the City's vision as a livable community with excellent services, a strong identity, healthy business opportunities, and a strong and efficient government. Future land use, circulation, housing, conservation, and other decisions in the City are guided by goals and policies set forth in the General Plan. The General Plan is a State-required legal document (Government Code Section 65300) that provides guidance to decision-makers regarding the conservation of resources and the future physical form and character of development in the City. It is the jurisdiction's official statement regarding the extent and types of development of land and infrastructure that will achieve the community's physical, economic, social, and environmental goals. The General Plan expresses the City's goals and articulates the City's intentions with respect to the rights and expectations of the general public, property owners, community interest groups, prospective investors, and business interests. Although the General Plan consists of individual sections, or elements, that address a specific area of concern, it also embodies a comprehensive and integrated planning approach.

In 2017, the City initiated a multi-year process to update the City's General Plan, referred to as "General Plan Update" or GPU. If adopted, this GPU would be the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions through the anticipated plan horizon year of 2040. The General Plan Update would serve as the City's "blueprint" for future development, providing the policy guidance for achieving the community's vision.

The City's current General Plan dates back to 1992 and is in need of an update as new opportunities, challenges, and approaches have emerged in recent years. The proposed GPU will address emerging issues and community priorities, ensure compliance with State law, and revise implementing policy frameworks to focus on present and future goals and policy objectives. The proposed GPU will also incorporate new and updated assumptions, data, and analysis, as well as establish a new vision and blueprint for development and investment through 2040.

The proposed GPU will address nine General Plan elements, seven of which are required by State law (i.e., circulation, conservation, housing, land use, noise, open space, and safety). In addition to these seven elements, the proposed GPU will establish a Sustainability Element and an Economic Development Element.

Rolling Hills Estates is essentially a built-out City with only two vacant parcels (other than those designated for open space), a low-density residential parcel and a commercial use parcel. The residential neighborhoods, as well as the parks and recreation areas, in the City are well-established and are not expected to change during the timeline of this proposed GPU. It is anticipated that the GPU will adjust the land use designations of certain parcels to match their current uses, including certain open space areas and parcels built out with high-density residential uses as these uses are not envisioned to change during the GPU timeline. The institutional properties (e.g., schools) are also envisioned to remain during the planning horizon. However, depending on the availability of the space, the proposed GPU may allow certain institutional uses to create opportunities for on-site affordable workforce housing. In addition, the existing mixed-use overlay that allows for residential development in the Commercial District may be extended to parcels designated for commercial office use.

In addition to citywide planning direction, the GPU is expected to include focused long-range planning direction and visioning for the Commercial District. Potential changes to the Commercial District include revising development standards to reflect market needs and incentivize development/redevelopment in a manner consistent with the City's vision for the District (to be developed as part of the GPU). Examples of potential revisions to development standards include:

- Increasing the allowed residential density in the mixed-use overlay;
- Consideration of form-based code standards; and
- Modernization of parking requirements to utilize land more efficiently.

The purpose of this letter is to request any information that you and other tribal elders may have regarding tribal cultural resources located in the Planning Area pursuant to AB 52 (Native Americans: California Environmental Quality Act) and SB 18 (Traditional Tribal Cultural Places). Your comments regarding decisions that may affect ancestral tribal sites are important to the City. Should you desire consultation with the City, please be advised that this should be done within 30 days of receipt of this letter pursuant to AB 52 and 90 days of receipt pursuant to SB 18.

Please contact me at (310) 377-1577 (extension 115) or jeannien@rollinghillsestatesca.gov if you have any questions or would like to request consultation.

Sincerely,

Jeanne Naughton

Jeannie Naughton, AICP
Planning Manager

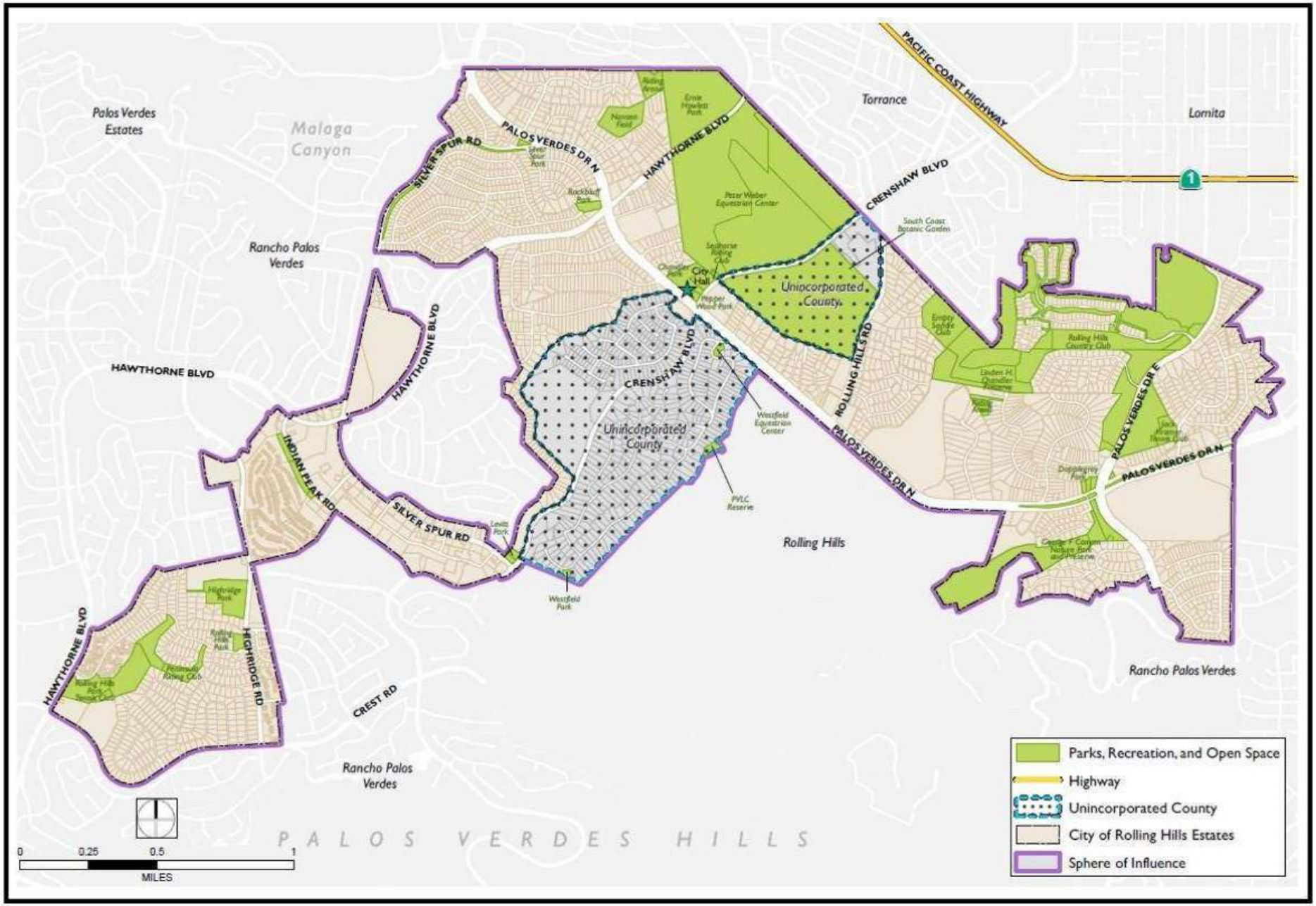
Encl: Figure 1: Regional Location Map
Figure 2: Planning Area Map

Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Robert Dorame, Chairperson
Gabrielino Tongva Indians of California Tribal Council
PO Box 490
Bellflower, CA 90707

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Dorame:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

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In 2017, the City initiated a multi-year process to update the City's General Plan, referred to as "General Plan Update" or GPU. If adopted, this GPU would be the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions through the anticipated plan horizon year of 2040. The General Plan Update would serve as the City's "blueprint" for future development, providing the policy guidance for achieving the community's vision.

The City's current General Plan dates back to 1992 and is in need of an update as new opportunities, challenges, and approaches have emerged in recent years. The proposed GPU will address emerging issues and community priorities, ensure compliance with State law, and revise implementing policy frameworks to focus on present and future goals and policy objectives. The proposed GPU will also incorporate new and updated assumptions, data, and analysis, as well as establish a new vision and blueprint for development and investment through 2040.

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Rolling Hills Estates is essentially a built-out City with only two vacant parcels (other than those designated for open space), a low-density residential parcel and a commercial use parcel. The residential neighborhoods, as well as the parks and recreation areas, in the City are well-established and are not expected to change during the timeline of this proposed GPU. It is anticipated that the GPU will adjust the land use designations of certain parcels to match their current uses, including certain open space areas and parcels built out with high-density residential uses as these uses are not envisioned to change during the GPU timeline. The institutional properties (e.g., schools) are also envisioned to remain during the planning horizon. However, depending on the availability of the space, the proposed GPU may allow certain institutional uses to create opportunities for on-site affordable workforce housing. In addition, the existing mixed-use overlay that allows for residential development in the Commercial District may be extended to parcels designated for commercial office use.

In addition to citywide planning direction, the GPU is expected to include focused long-range planning direction and visioning for the Commercial District. Potential changes to the Commercial District include revising development standards to reflect market needs and incentivize development/redevelopment in a manner consistent with the City's vision for the District (to be developed as part of the GPU). Examples of potential revisions to development standards include:

- Increasing the allowed residential density in the mixed-use overlay;
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The purpose of this letter is to request any information that you and other tribal elders may have regarding tribal cultural resources located in the Planning Area pursuant to AB 52 (Native Americans: California Environmental Quality Act) and SB 18 (Traditional Tribal Cultural Places). Your comments regarding decisions that may affect ancestral tribal sites are important to the City. Should you desire consultation with the City, please be advised that this should be done within 30 days of receipt of this letter pursuant to AB 52 and 90 days of receipt pursuant to SB 18.

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Jeannie Naughton

Jeannie Naughton, AICP
Planning Manager

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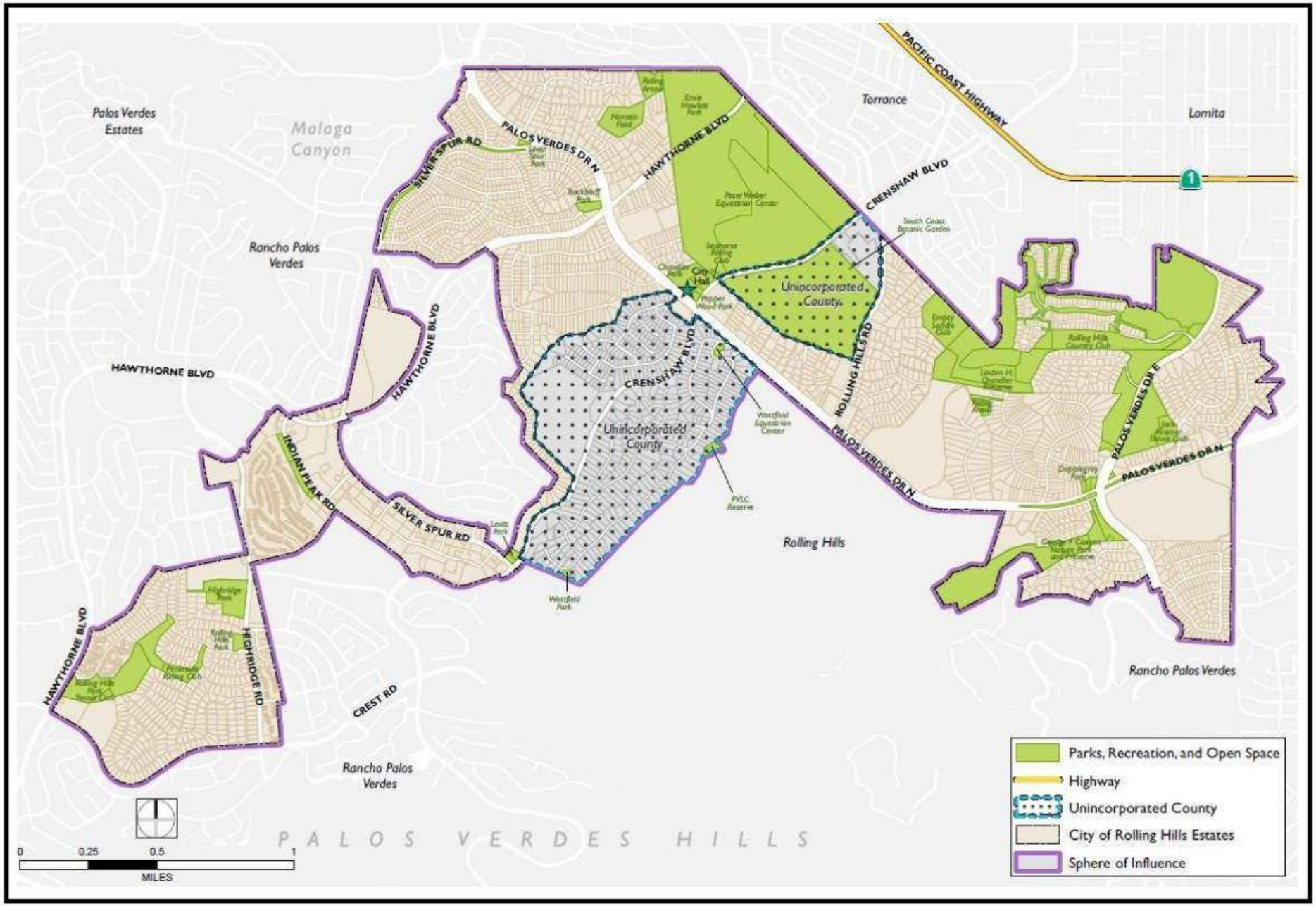
Figure 2: Planning Area Map

Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Andrew Salas, Chairperson
Gabrieleño Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, CA, 91723

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Salas:

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Please contact me at (310) 377-1577 (extension 115) or jeannien@rollinghillsestatesca.gov if you have any questions or would like to request consultation.

Sincerely,

Jeanne Naughton

Jeannie Naughton, AICP
Planning Manager

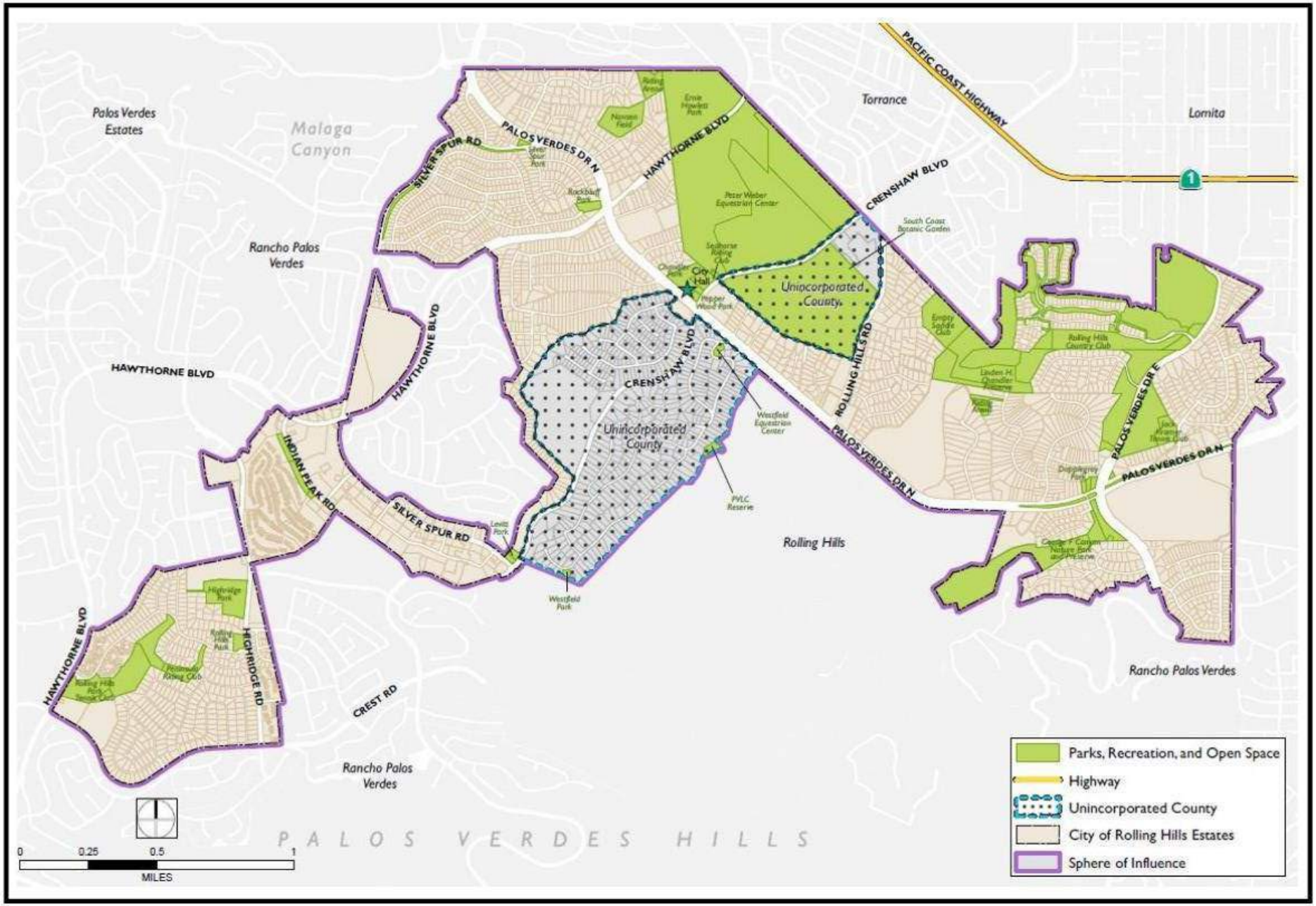
Encl: Figure 1: Regional Location Map
Figure 2: Planning Area Map

Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Jairo Avila, Tribal Historic and Cultural Preservation Officer
Fernandeño Tataviam Band of Mission Indians
1019 2nd Street, Suite 1
San Fernando, CA 91340

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Avila:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles, as shown in Figure 1. The General Plan Planning Area (Planning Area) is the land area addressed by the City of Rolling Hills Estates (City) General Plan Update (Proposed Project), which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent) and the unincorporated Sphere of Influence (SOI) (16 percent). As shown in Figure 2, the boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

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Planning Area

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Michael Baker INTERNATIONAL

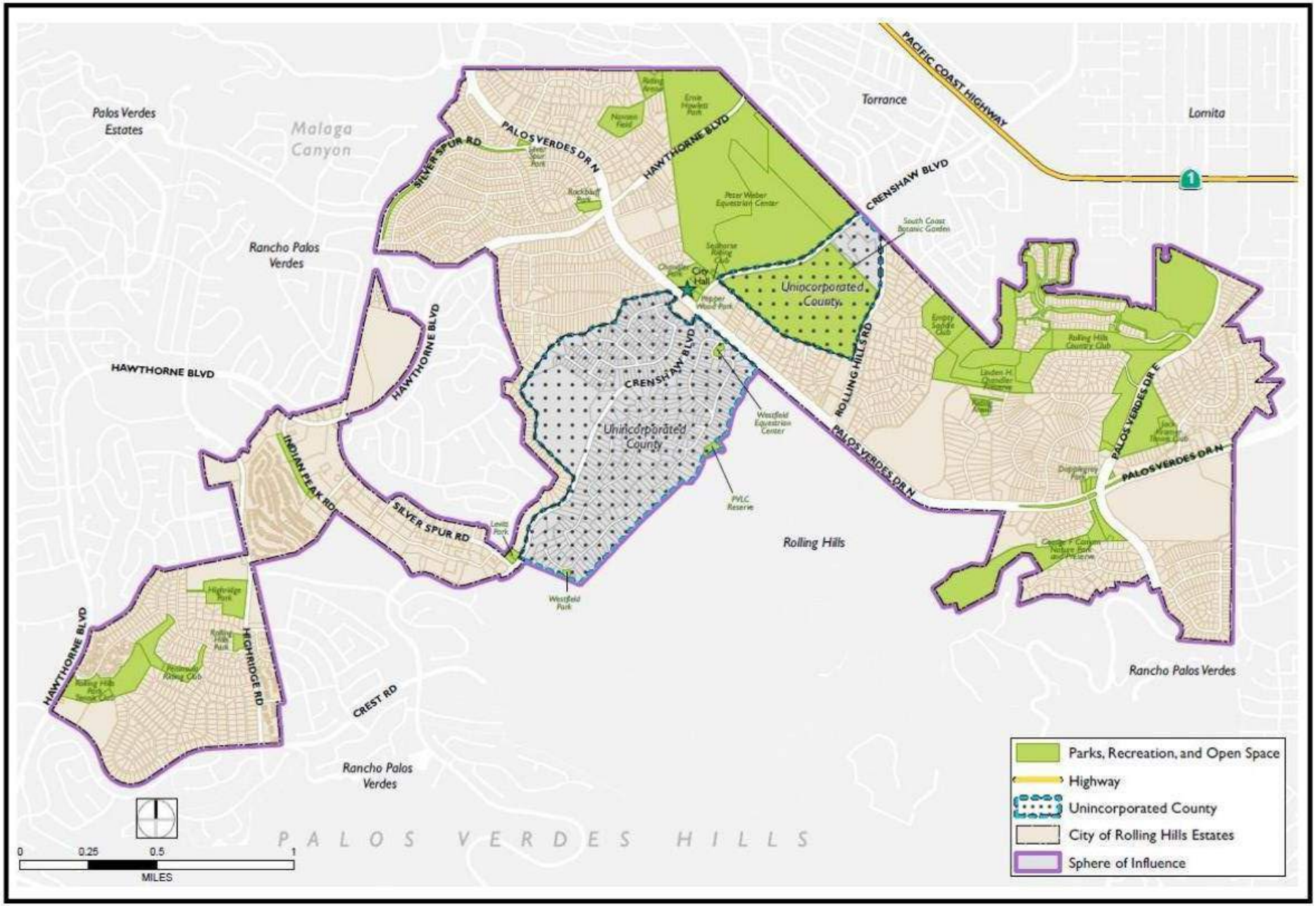

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FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Sam Dunlap, Cultural Resources Director
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Dunlap:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

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Planning Area

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Regional Location Map

Michael Baker INTERNATIONAL

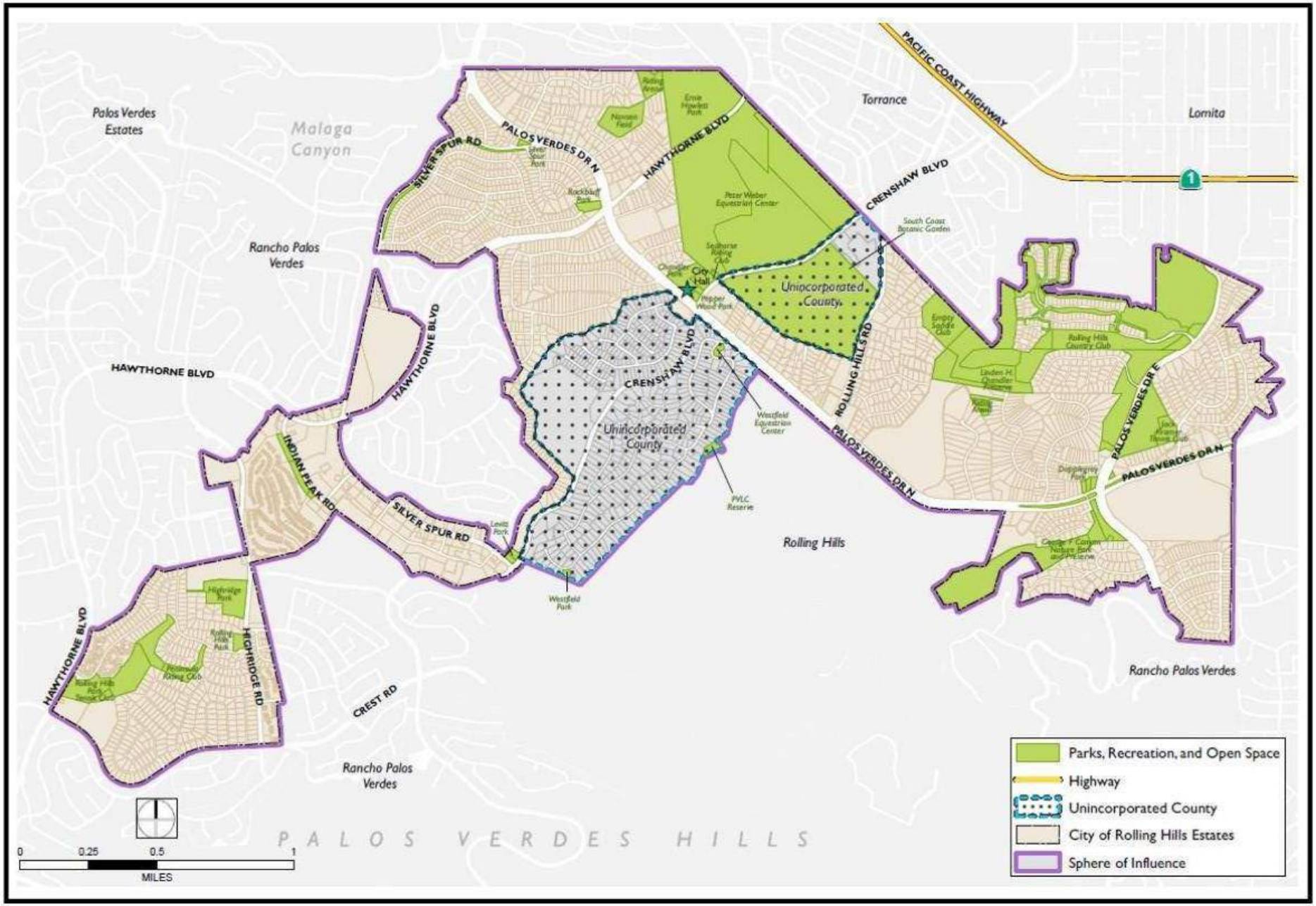

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FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Sandonne Goad, Chairperson
Gabrielino/Tongva Nation
106 1/2 Judge John Aiso St., #231
Los Angeles, CA, 90012

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Ms. Goad:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

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Planning Area

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Regional Location Map

Michael Baker INTERNATIONAL

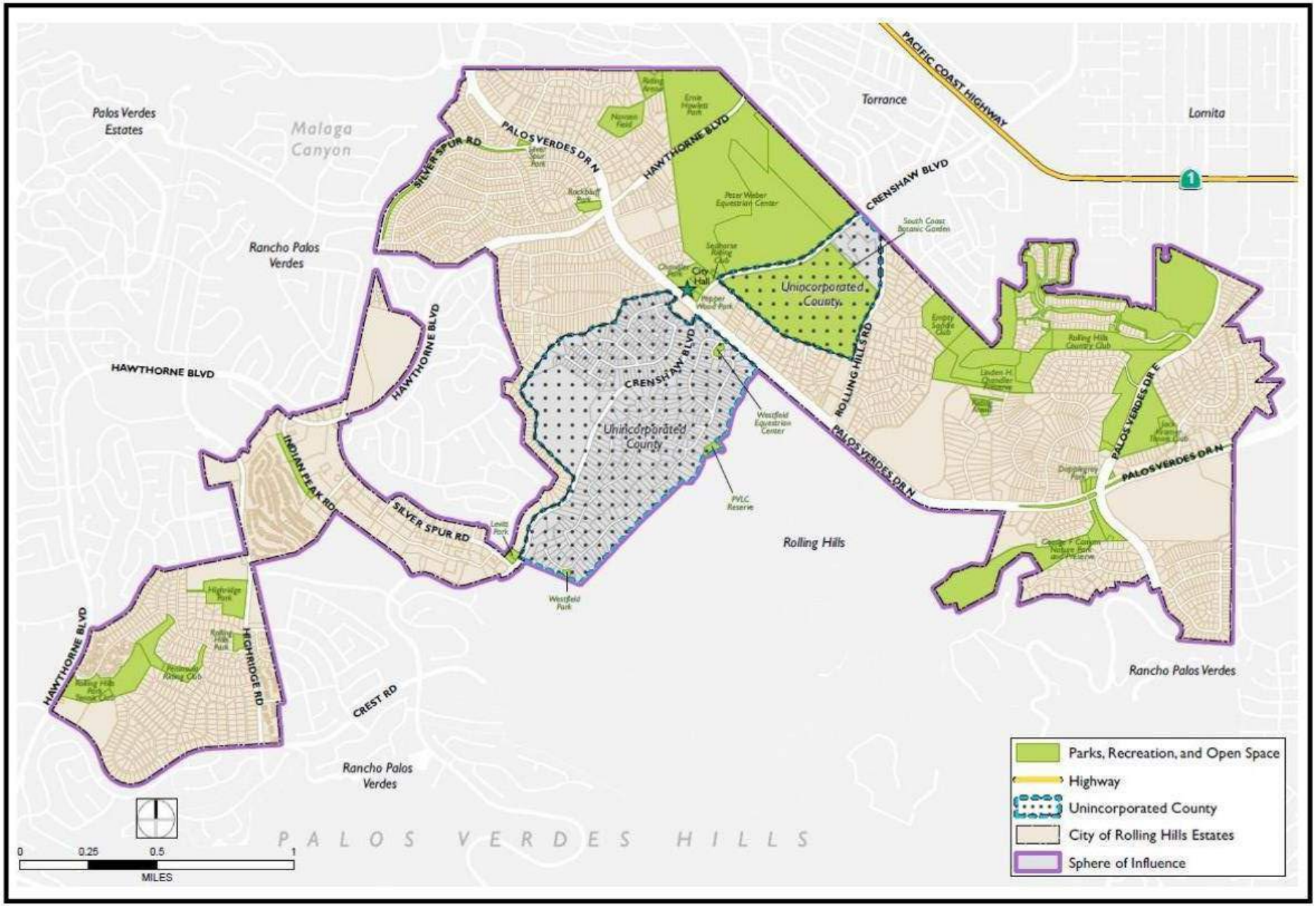

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FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Charles Alvarez, Tribal Chairman
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA, 91307

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Alvarez:

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Michael Baker INTERNATIONAL

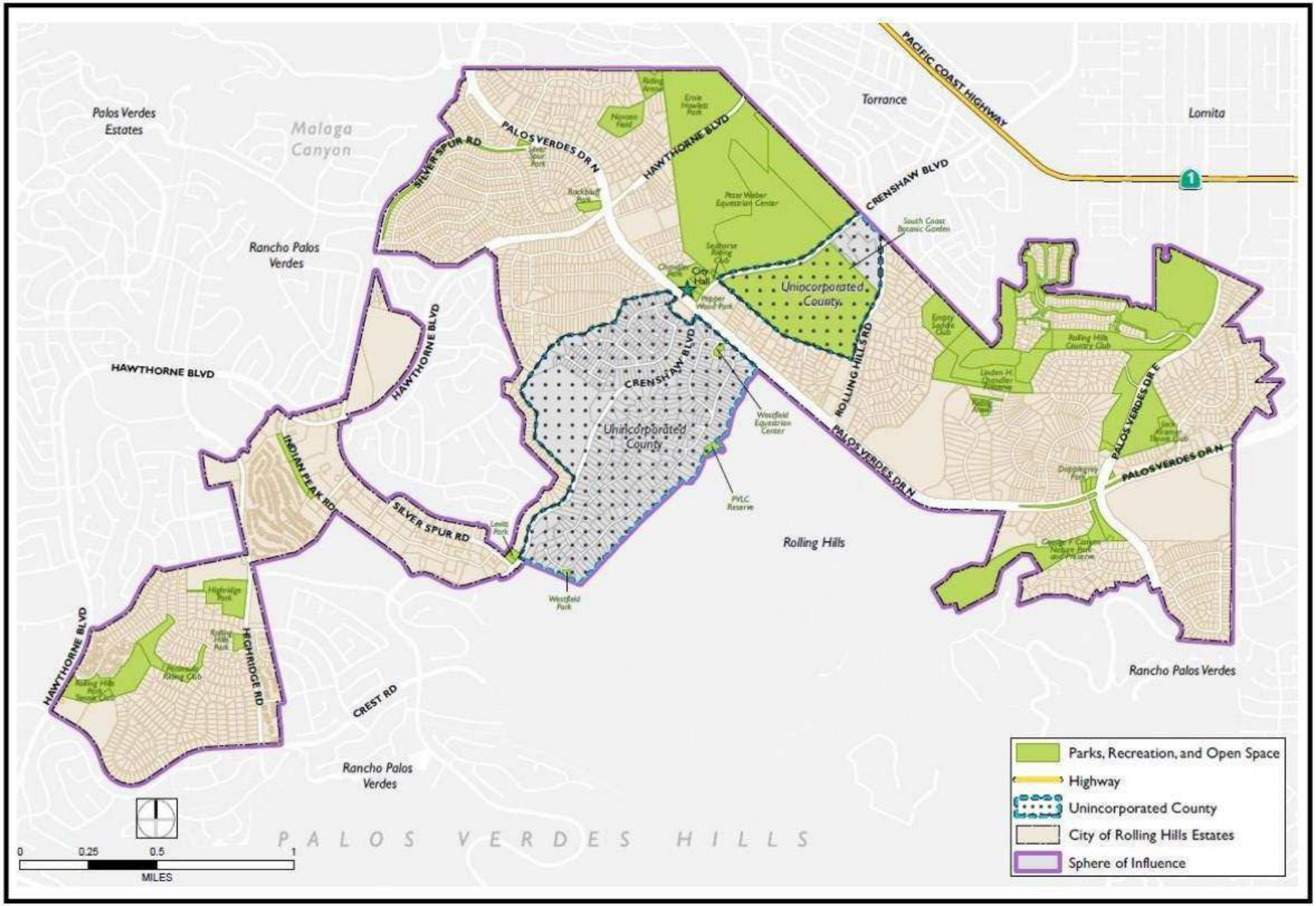

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FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 17, 2021

Donna Smith Yocum, Chairwoman
San Fernando Band of Mission Indians
P.O. Box 221838
Newhall, CA 91322

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Ms. Yocum:

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Please contact me at (310) 377-1577 (extension 115) or jeannien@rollinghillsestatesca.gov if you have any questions or would like to request consultation.

Sincerely,

Jeanne Naughton

Jeannie Naughton, AICP
Planning Manager

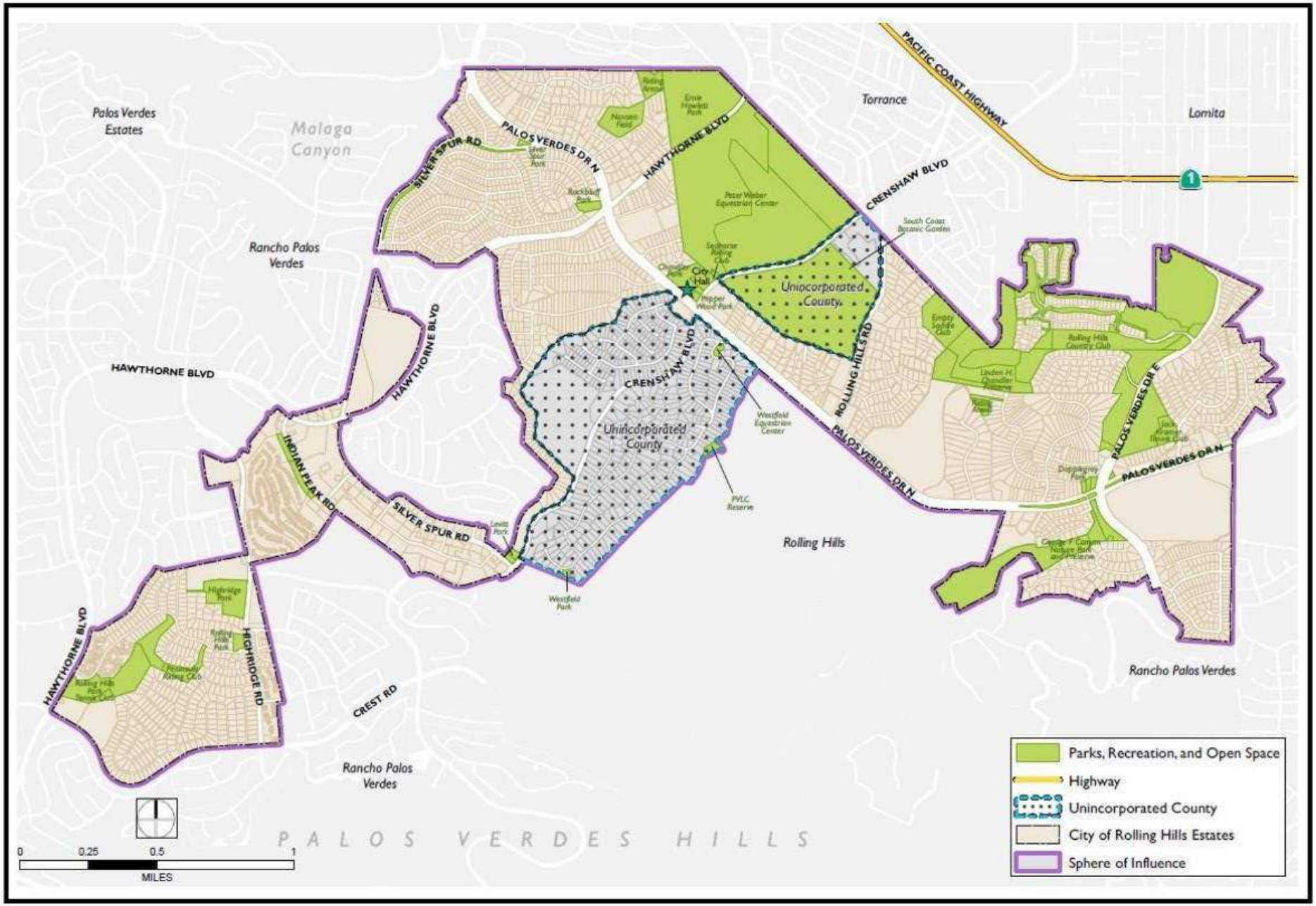
Encl: Figure 1: Regional Location Map
Figure 2: Planning Area Map

Source: City of Rolling Hills Estates, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2017

Planning Area

FIGURE 1
Regional Location Map

Michael Baker INTERNATIONAL



Source: City of Rolling Hills Estates, 2017; Dyett & Bhatia, 2017.

FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

City of
Rolling Hills Estates

Steven Zuckerman
Mayor

Frank V. Zerunyan
Mayor Pro Tem

Britt Huff
Council Member

Velveth Schmitz
Council Member

Debby Stegura
Council Member

May 12, 2021

Joseph Ontiveros, Cultural Resources Director
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Ontiveros:

The City of Rolling Hills Estates has initiated the process of updating its General Plan. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, in accordance with Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18), we are seeking your comments on the proposed General Plan Update (GPU).

The City of Rolling Hills Estates is located in the center of the Palos Verdes Peninsula in the southwestern portion of the County of Los Angeles, as shown in Figure 1. The General Plan Planning Area (Planning Area) is the land area addressed by the City of Rolling Hills Estates (City) General Plan Update (Proposed Project), which encompasses approximately 2,378 acres, including all of the land within City limits (84 percent) and the unincorporated Sphere of Influence (SOI) (16 percent). As shown in Figure 2, the boundaries of the Planning Area generally follow the borders of the City. The City is bounded by the City of Rancho Palos Verdes on the west and south, the City of Rolling Hills on the south, the City of Palos Verdes Estates on the north, the City of Torrance on the north and northeast, the City of Lomita on the north and east, and unincorporated Los Angeles County on the south and southeast.

The Rolling Hills Estates General Plan is a guidance document that describes the City's vision as a livable community with excellent services, a strong identity, healthy business opportunities, and a strong and efficient government. Future land use, circulation, housing, conservation, and other decisions in the City are guided by goals and policies set forth in the General Plan. The General Plan is a State-required legal document (Government Code Section 65300) that provides guidance to decision-makers regarding the conservation of resources and the future physical form and character of development in the City. It is the jurisdiction's official statement regarding the extent and types of development of land and infrastructure that will achieve the community's physical, economic, social, and environmental goals. The General Plan expresses the City's goals and articulates the City's intentions with respect to the rights and expectations of the general public, property owners, community interest groups, prospective investors, and business interests. Although the General Plan consists of individual sections, or elements, that address a specific area of concern, it also embodies a comprehensive and integrated planning approach.

In 2017, the City initiated a multi-year process to update the City's General Plan, referred to as "General Plan Update" or GPU. If adopted, this GPU would be the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions through the anticipated plan horizon year of 2040. The General Plan Update would serve as the City's "blueprint" for future development, providing the policy guidance for achieving the community's vision.

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Planning Area

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Michael Baker INTERNATIONAL

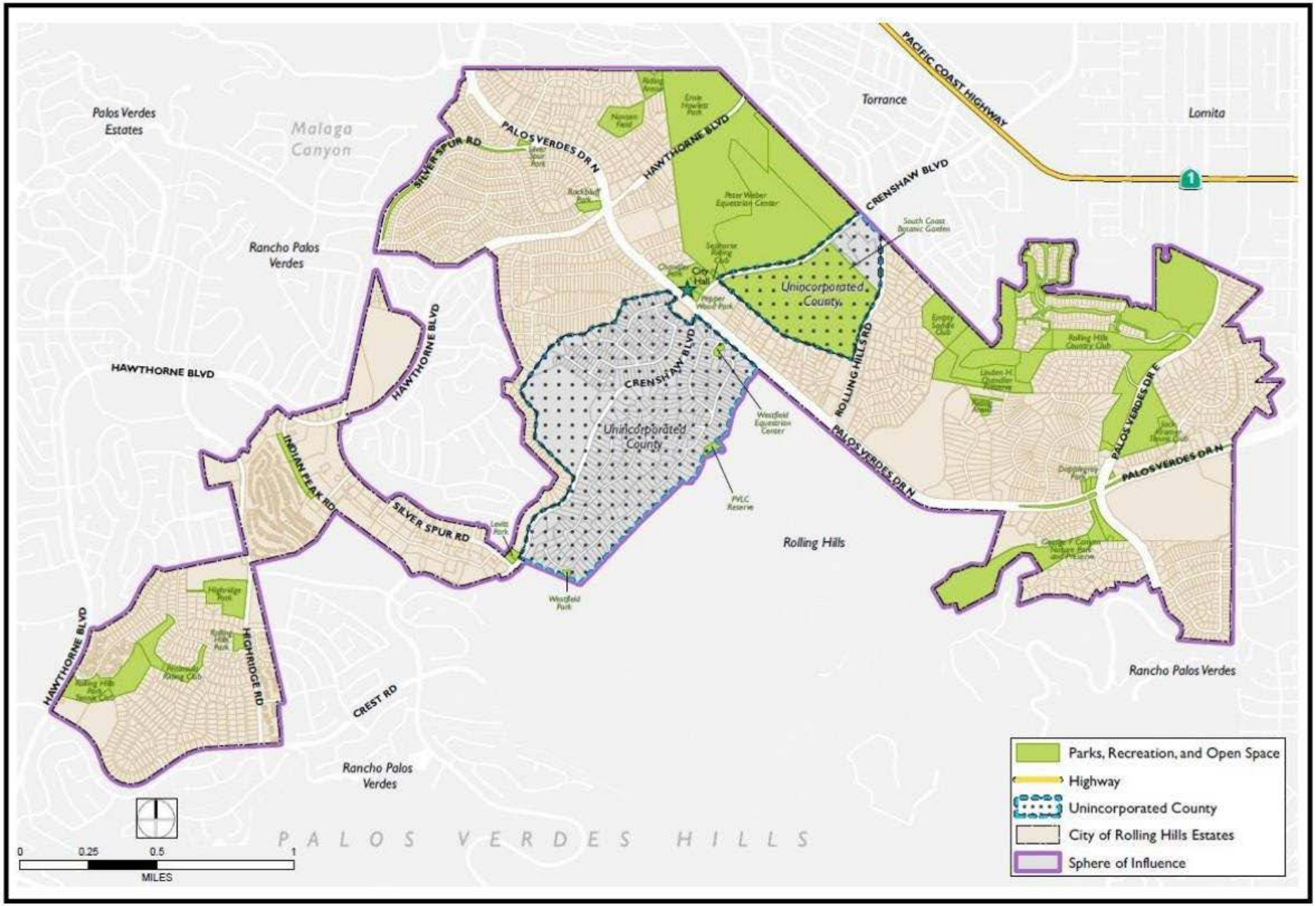

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FIGURE 2
Planning Area Map

Michael Baker INTERNATIONAL

May 12, 2021

Michael Mirelez, Cultural Resources Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Re: City of Rolling Hills Estates General Plan Update AB 52 and SB 18 Tribal Consultation

Dear Mr. Mirelez:

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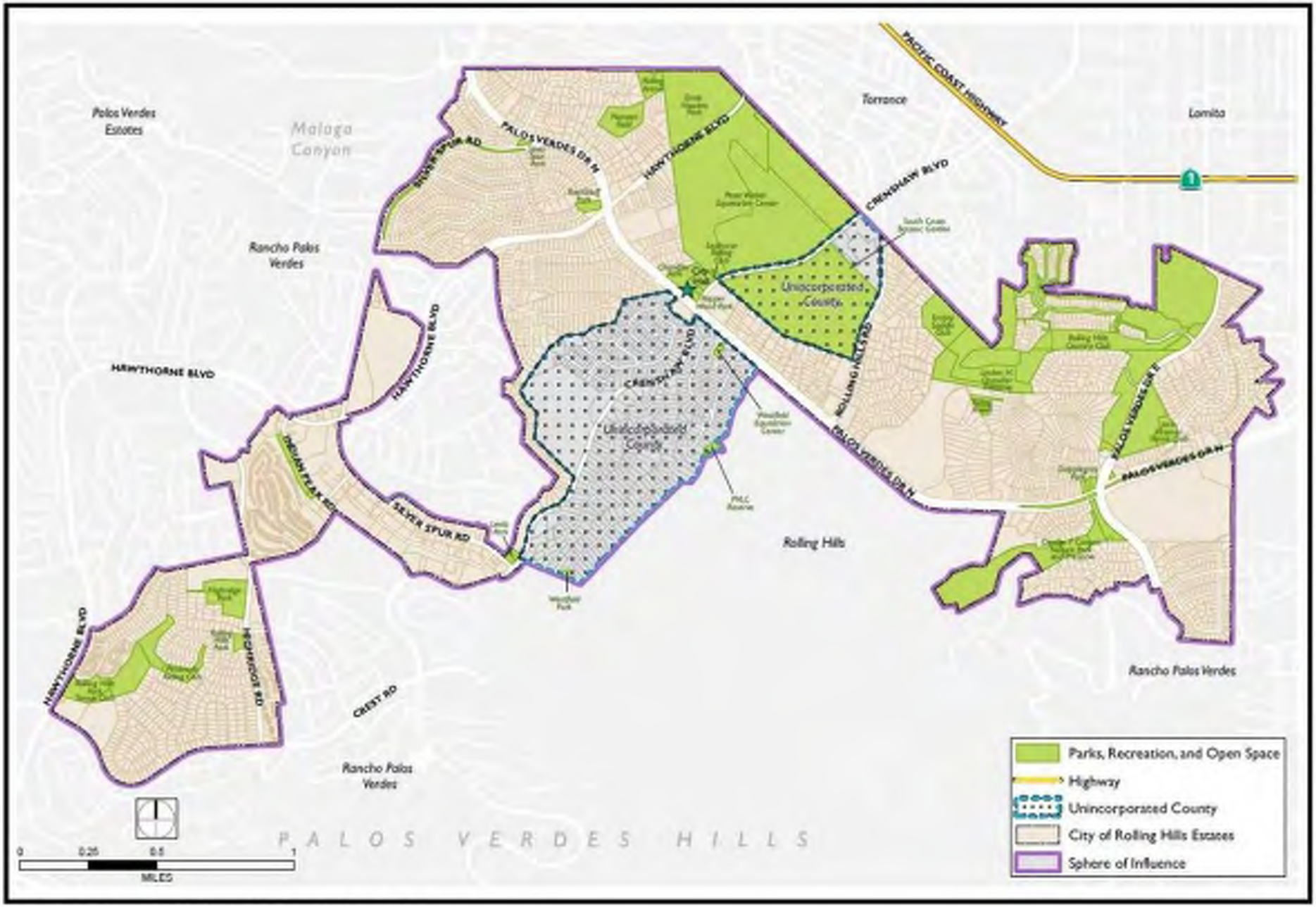
Michael Baker INTERNATIONAL



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