

# Appendix A

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Notice of Preparation

**City of Palmdale  
Palmdale 2045  
General Plan Update  
(General Plan Amendment 20-003)  
(Zoning Ordinance Amendment 21-007)**

**Notice of Preparation of a  
Draft Environmental Impact Report**

The City of Palmdale will be the Lead Agency for the preparation of an Environmental Impact Report (EIR) that will analyze the environmental impacts associated with a proposed update to the Palmdale General Plan (Palmdale 2045), referred to herein as the “proposed project” or “General Plan.” The actions that make up the proposed project are described below. More information on the proposed project is available on the project website at: <https://www.palmdale2045.org/>. The Planning Area for the proposed project includes the land within the City Limits, the Sphere of Influence (SOI), and several unincorporated Los Angeles County ‘islands.’ The proposed General Plan land use map showing the Planning Area is shown at the end of this Notice of Preparation (NOP).

**Project Description**

The proposed project is a three-plus-year comprehensive update to the City’s General Plan, the guiding document for the future of Palmdale over 25 years (2020-2045). The General Plan serves as the City’s primary guide for land use and development decisions and is a key tool for influencing and improving the quality of life for residents and businesses. As such, it serves as the “blueprint” for future development and conservation of a community. The General Plan will help the City plan for important community issues such as new growth, housing and infrastructure needs, and environmental protection. It also sets the stage for future social, physical, and economic development of the City. It addresses issues that impact the entire community, such as how land is used, where buildings are constructed, and the locations of infrastructure.

Under State law, the General Plan must serve as the foundation upon which all land use decisions are to be based, and must also be comprehensive, internally consistent, and have a long-term perspective. State law further mandates that the General Plan:

- Identify land use, circulation, environmental, economic, and social goals and policies for the City and its surrounding planning area as they relate to future growth and development;
- Provide a basis for local government decision-making, including decisions on development approvals and exactions;

- Provide citizens the opportunity to participate in the planning and decision-making process of their communities; and
- Inform citizens, developers, decision-makers, and other cities and counties of the ground rules that guide development within a particular community.

According to State law, General Plans are required to cover nine topics: land use, circulation, housing, conservation, open space, noise, air quality, safety, and environmental justice. Jurisdictions may include any other topic that is relevant to planning its future. The updated City of Palmdale General Plan will include the State required topics plus economic development, urban design, infrastructure, military readiness, community facilities, sustainability and resilience, and climate change.

The General Plan will focus on enhancing the community identity, building on planned infrastructure investments, improving multi-modal active transportation and connectivity, integrating health and equity, and capitalizing on the City's unique location in the region. Palmdale 2045's vision for the future includes the following vision themes.

- **Unified and welcoming community.** The Palmdale community values opportunity, diversity, and unity, and seeks to promote Palmdale's positive reputation while boosting community beautification
- **Active and vibrant downtown.** Palmdale residents desire a future downtown that fosters a sense of place, promotes local businesses, provides gathering spaces, and events, and improves the overall appearance of Palmdale
- **Diverse and high-quality job options.** Palmdale seeks to retain and expand its employment base through training for key industries, connecting residents to local jobs, and promoting telecommuting within the City
- **Diverse and resilient local economy.** The City of Palmdale values its existing aerospace presence and aims to leverage and diversify new economic opportunities from expanded transportation connections
- **Safe, healthy place to live and work.** Palmdale residents want to address crime and safety, increase access to parks and open space, and support marginalized communities like foster youth and those experiencing homelessness
- **High quality medical and mental healthcare.** As a medical provider shortage area, Palmdale seeks to improve access to quality medical and mental healthcare services and facilities by attracting physicians, maintaining the Palmdale Regional Medical Center, and expanding services
- **Housing options for residents at different stages of life and ability.** The residents of Palmdale desire to preserve and expand affordable housing and diversify housing types across the City that support residents of all abilities through different stages of life
- **High quality and accessible educational opportunities.** Citizens of Palmdale seek to promote and expand educational opportunities in the City including higher education, trade school, and formal and informal training programs
- **Beautiful natural setting.** The Palmdale community values its natural setting and seeks to improve connectivity to trails and open space, maintain mountain views, healthy air quality, and dark night sky

- **Forefront of transportation innovations.** On the cusp of major regional transportation improvements, Palmdale seeks to leverage planned investments and improve local transit opportunities
- **General Plan implementation.** Residents of Palmdale value the long-term vision of the General Plan Update and desire regular review and update of the Plan including metrics for tracking implementation

Palmdale 2045 identifies major strategies and physical improvements for the City over the next 25 years. These strategies include creating a vibrant downtown near the future multimodal transit station, establishing three health and wellness districts and two education districts, transforming Palmdale Boulevard into a mixed-use corridor, promoting a diversity of housing types in the City, forming village centers that offer a mix of residential choices and daily goods and services near existing neighborhoods, and building off existing industrial and aerospace business opportunities. These strategies will support existing and future employees, businesses, and residents by improving quality of life in Palmdale.

The following actions will also be taken by the City of Palmdale in connection with the General Plan Update and are also considered part of the proposed project to be analyzed in the forthcoming EIR:

- Adoption and implementation of the General Plan Update (Palmdale 2045 Plan)
- Adoption and implementation of the Climate Action Plan
- Adoption and implementation of the Zoning Ordinance Amendment

The Plan will also include an update of the City's Housing Element, in compliance with the requirements of State Housing Element law, which requires the City to adopt an updated Housing Element by October 2021. This Housing Element update will also be analyzed in the EIR.

### **Environmental Impact Report**

The Draft EIR will be a program EIR. Per Section 15168 of the State *CEQA Guidelines*, a program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project. The purpose of a program EIR is to allow the lead agency to consider broad policy alternatives and program wide mitigation measures early in the process when the agency has greater flexibility to deal with basic problems or cumulative impacts.

The EIR will examine each of the issue areas on the City's environmental checklist. Issues to be discussed include the following:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources



- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance

In addition to the CEQA-required “no project” alternative, the EIR will examine a range of land use scenarios that address one or more of the potential environmental effects of the proposed project.

The City of Palmdale would like to know your views or the views of your organization as to the scope and content of the environmental information that should be addressed in connection with the proposed project. Public agencies may need to use the EIR prepared by the City of Palmdale when considering permits or other approvals regarding certain aspects of the proposed actions. Due to 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.

Please send your response to Megan Taggart, Planning Manager, at:

City of Palmdale  
Department of Economic and Community Development  
38250 Sierra Highway  
Palmdale, California 93550

Megan Taggart can be reached at 661-267-5213, or by emailing [mtaggart@cityofpalmdale.org](mailto:mtaggart@cityofpalmdale.org). When responding to the NOP, please provide the name for a contact person in your agency.

The City of Palmdale will hold an EIR Scoping Meeting to provide an additional opportunity for input on the scope and content of the EIR. The Scoping Meeting is scheduled for Wednesday, June 30, at 5:30 p.m. Please check the project website (<https://www.palmdale2045.org/>) to confirm this meeting time prior to the meeting. Due to ongoing restriction related to the COVID-19 pandemic, the meeting will be conducted virtually.

To join this meeting, please register in advance by clicking on, or pasting into your web browser, the following link:

[https://us02web.zoom.us/join/register/tZwozemvrTIsHtYjmm9iVRZyXjtO\\_-TEK9Rg](https://us02web.zoom.us/join/register/tZwozemvrTIsHtYjmm9iVRZyXjtO_-TEK9Rg)

After registering, you will receive a confirmation email containing information about joining the meeting. Please note that this meeting will occur prior to a Joint General Plan Advisory Committee and Public Workshop (and will use the same meeting link).

Project Title: City of Palmdale 2045 General Plan Update (GPA 20-003 & ZOA 21-007)

Project Sponsor: City of Palmdale

Date 6/23/21

Signature 

Title Planning Manager

Telephone 661-267-5213





**DEPARTMENT OF TRANSPORTATION**

DISTRICT 7 – Office of Regional Planning  
100 S. MAIN STREET, MS 16  
LOS ANGELES, CA 90012  
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*Making Conservation  
a California Way of Life.*

June 29, 2021

Megan Taggart  
City of Palmdale  
38250 Sierra Highway  
Palmdale, CA 93550

RE: City of Palmdale 2045 General Plan Update  
– Notice of Preparation of an Environmental  
Impact Report (NOP)  
SCH # 2021060494  
GTS # 07-LA-2021-03634  
Vic. LA-138/PM: 44.445

Dear Megan Taggart:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced NOP. The proposed project (Palmdale 2045) is a three-plus-year comprehensive update to the City's General Plan, the guiding document for the future of Palmdale over 25 years (2020-2045). The General Plan will focus on enhancing community identity, building on planned infrastructure investments, improving multi-modal active transportation and connectivity, integrating health and equity, and capitalizing on the City's unique location in the region. Palmdale 2045 identifies major strategies and physical improvements for the City over the next 25 years. These strategies include creating a vibrant downtown near the future multimodal transit station, establishing three health and wellness districts and two education districts, transforming Palmdale Boulevard into a mixed-use corridor, promoting a diversity of housing types in the City, forming village centers that offer a mix of residential choices and daily goods and services near existing neighborhoods, and building off existing industrial and aerospace business opportunities. The City of Palmdale is the Lead Agency under the California Environmental Quality Act (CEQA).

Since the project covers the entire City, it is located near State Routes 14 and 138. After reviewing the NOP, Caltrans looks forward to reviewing this project's forthcoming Vehicle Miles Traveled (VMT) analysis. As a reminder, Senate Bill 743 (2013) mandates that VMT be used as the primary metric in identifying transportation impacts of all future projects under CEQA, starting July 1, 2020.

For information on determining transportation impacts in terms of VMT 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](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 CEQA review process so that, through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

Caltrans also encourages lead agencies to promote alternative transportation, as the City of Palmdale will do by supporting local transit opportunities in the General Plan Update. This will increase accessibility and decrease Greenhouse Gas Emissions, which supports Caltrans’ mission to provide a safe and reliable transportation network that serves all people and respects the environment. For additional strategies to integrate into the General Plan Update that will promote equity and environmental preservation, 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](mailto:Emily.Gibson@dot.ca.gov), and refer to GTS # 07-LA-2021-03634.

Sincerely,

*Emily Gibson*

EMILY GIBSON  
Acting IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse



NATIVE AMERICAN HERITAGE COMMISSION

RECEIVED

JUL 06 2021

PLANNING DEPT.

June 30, 2021

Megan Taggart
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

Re: 2021060494, City of Palmdale 2045 General Plan Update Project, Los Angeles County

Dear Ms. Taggart:

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.

CHAIRPERSON
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PARLIAMENTARIAN
Russell Attebery
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COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

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## 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, subs. (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](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](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](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, subs. (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](mailto:Andrew.Green@nahc.ca.gov).

Sincerely,



Andrew Green  
Cultural Resources Analyst

cc: State Clearinghouse



July 16, 2021

Ref. DOC 6232747

Ms. Megan Taggart, Planning Manager  
City of Palmdale  
Department of Economic and Community Development  
38250 Sierra Highway  
Palmdale, CA 93550

Dear Ms. Taggart:

**NOP Response for City of Palmdale 2045 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 June 25, 2021. The City of Palmdale (City) is located within the jurisdictional boundaries of District Nos. 14 and 20. 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 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 Districts should review individual developments within the City to determine whether or not sufficient trunk sewer capacity exists to serve each project and if Districts' facilities will be affected by the project.
3. The wastewater generated by the City is treated at the Palmdale Water Reclamation Plant, which has a capacity of 12 million gallons per day (mgd) and currently processes an average flow of 9.3 mgd, or the Lancaster Water Reclamation Plant, which has a capacity of 18 mgd and currently processes an average flow of 14.3 mgd.
4. In order to estimate the volume of wastewater the project will generate, go to [www.lacsd.org](http://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.
5. 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 this 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](http://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.

6. 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 2743 or at [mandyng@lacs.org](mailto:mandyng@lacs.org).

Very truly yours,

*Mandy Ng*

Mandy Ng  
Environmental Planner  
Facilities Planning Department

MMN:mmn



**COUNTY OF LOS ANGELES  
FIRE DEPARTMENT**

1320 NORTH EASTERN AVENUE  
LOS ANGELES, CALIFORNIA 90063-3294  
(323) 881-2401  
www.fire.lacounty.gov

*"Proud Protectors of Life, Property, and the Environment"*

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FIFTH DISTRICT

July 20, 2021

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JUL 26 2021

PLANNING DEPT.

Megan Taggart, Planning Manager  
City of Palmdale  
Department of Economic and Community Development  
38250 Sierra Highway  
Palmdale, CA 93550

Dear Ms. Taggart:

**NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT, "PALMDALE 2045 GENERAL PLAN UPDATE," WILL HELP THE CITY PLAN FOR IMPORTANT COMMUNITY ISSUES SUCH AS NEW GROWTH, HOUSING AND INFRASTRUCTURE NEEDS, AND ENVIRONMENTAL PROTECTION, IT ALSO SETS THE STAGE FOR FUTURE SOCIAL, PHYSICAL, AND ECONOMIC DEVELOPMENT OF THE CITY, PALMDALE, FFER 2021006978**

The Notice of Preparation of a Draft Environmental Impact Report has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department.

The following are their comments:

**PLANNING DIVISION:**

We have no comments.

For any questions regarding this response, please contact Kien Chin, Planning Analyst, at (323) 881-2404 or [Kien.Chin@fire.lacounty.gov](mailto:Kien.Chin@fire.lacounty.gov).

**LAND DEVELOPMENT UNIT:**

1. Each development must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and fire hydrants.

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS  
ARTESIA  
AZUSA  
BALDWIN PARK  
BELL  
BELL GARDENS  
BELLFLOWER  
BRADBURY  
CALABASAS

CARSON  
CERRITOS  
CLAREMONT  
COMMERCE  
COVINA  
CUDAHY  
DIAMOND BAR  
DUARTE

EL MONTE  
GARDENA  
GLENORA  
HAWAIIAN GARDENS  
HAWTHORNE  
HERMOSA BEACH  
HIDDEN HILLS  
HUNTINGTON PARK  
INDUSTRY

INGLEWOOD  
IRWINDALE  
LA CANADA-FLINTRIDGE  
LA HABRA  
LA MIRADA  
LA PUENTE  
LAKEWOOD  
LANCASTER

LAWDALE  
LOMITA  
LYNWOOD  
MALIBU  
MAYWOOD  
NORWALK  
PALMDALE  
PALOS VERDES ESTATES  
PARAMOUNT

PICO RIVERA  
POMONA  
RANCHO PALOS VERDES  
ROLLING HILLS  
ROLLING HILLS ESTATES  
ROSEMEAD  
SAN DIMAS  
SANTA CLARITA

SIGNAL HILL  
SOUTH EL MONTE  
SOUTH GATE  
TEMPLE CITY  
VERNON  
WALNUT  
WEST HOLLYWOOD  
WESTLAKE VILLAGE  
WHITTIER

2. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than 20 feet in width. The roadway width shall be increased based on the type development proposed by the applicant. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building. The roadway shall provide approved signs and/or stripping stating, "NO PARKING - FIRE LANE" and shall be maintained in accordance with the County of Los Angeles Fire Code.
3. Every building constructed shall provide an adequate water supply for fire protection purposes. The fire hydrant spacing shall be in compliance with Appendix C in the County of Los Angeles Fire Code (Title 32). The fire flow requirements should be addressed in Appendix B of the County of Los Angeles Fire Code (Title 32).
4. A property which is located within an area described by the Fire Department as a Fire Hazard Severity Zone, a "Fuel Modification Plan" shall be submitted for review by the Fuel Modification Unit prior to building plan approval. Please contact the Department's Fuel Modification Unit for details. The Fuel Modification Plan Review Unit is located at 605 North Angeleno Avenue in the City of Azusa CA 91702-2904. They may be reached at (626) 969-5205 or visit <https://www.fire.lacounty.gov/forestry-division/forestry-fuel-modification>
5. When involved with subdivision in a city contracting fire protection with the County of Los Angeles Fire Department, Fire Department requirements for access, fire flows, and hydrants are addressed during the subdivision tentative map stage by the Land Development Unit.
6. Specific fire and life safety requirements for the construction phase will be addressed at the Fire Department building plan check review. There may be additional fire and life safety requirements during this time.

The Land Development Unit appreciates the opportunity to comment on this project. Should any questions arise regarding the Land Development Unit response, please contact Wally Collins at (323) 890-4243 or [Wally.Collins@fire.lacounty.gov](mailto:Wally.Collins@fire.lacounty.gov).

#### **FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:**

The statutory responsibilities of the County of Los Angeles Fire Department's Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed.

Under the Los Angeles County Oak tree Ordinance, a permit is required to cut, destroy, remove, relocate, inflict damage or encroach into the protected zone of any tree of the Oak genus which is 25 inches or more in circumference (eight inches in diameter), as measured 4 1/2 feet above mean natural grade.

Megan Taggart, Planning Manager

July 20, 2021

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If Oak trees are known to exist in the proposed project area further field studies should be conducted to determine the presence of this species on the project site.

The County of Los Angeles Fire Department's Forestry Division has no further comments regarding this project.

For any questions regarding this response, please contact Forestry Assistant, Nicholas Alegria at (818) 890-5719.

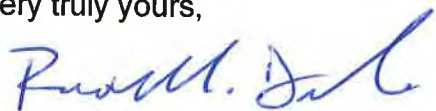
**HEALTH HAZARDOUS MATERIALS DIVISION:**

The Health Hazardous Materials Division of the Los Angeles County Fire Department has no comments or requirements for the project at this time.

Please contact HHMD senior typist-clerk, Perla Garcia at (323) 890-4035 or [Perla.garcia@fire.lacounty.gov](mailto:Perla.garcia@fire.lacounty.gov) if you have any questions.

If you have any additional questions, please contact this office at (323) 890-4330

Very truly yours,



RONALD M. DURBIN, CHIEF, FORESTRY DIVISION  
PREVENTION SERVICES BUREAU

RMD:ac





State of California – Natural Resources Agency

DEPARTMENT OF FISH AND WILDLIFE

South Coast Region  
3883 Ruffin Road  
San Diego, CA 92123  
(858) 467-4201

[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 21, 2021

Megan Taggart  
City of Palmdale  
38250 Sierra Highway  
Palmdale, CA 93550  
[MTaggart@cityofpalmdale.org](mailto:MTaggart@cityofpalmdale.org)

**Subject: Notice of Preparation of a Draft Environmental Impact Report for City of Palmdale General Plan Update (Palmdale 2045) Project, SCH #2021060494, City of Palmdale, Los Angeles County**

Dear Ms. Taggart:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the City of Palmdale (City; Lead Agency) for the Palmdale General Plan Update (Project). 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.

*Conserving California's Wildlife Since 1870*



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City of Palmdale  
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## Project Description and Summary

**Objective:** The proposed Project is a comprehensive update to the City's General Plan, which is the guiding document for the future of Palmdale over 25 years (2020-2045). The General Plan will focus on enhancing community identity, building on planned infrastructure investments, and improving multi-modal active transportation and connectivity. The Project identifies major strategies and physical improvements for the City over the next 25 years. These strategies include creating a downtown near the future multimodal transit station, establishing three health and wellness districts and two education districts, and transforming Palmdale Boulevard into a mixed-use corridor. The Project also aims to promote a diversity of housing types in the City, form village centers that offer a mix of residential choices and daily goods and services near existing neighborhoods, and building off existing industrial and aerospace business opportunities. The following actions will also be taken by the City in connection with the General Plan Update and are also considered part of the proposed Project to be analyzed in the forthcoming DEIR: Adoption and implementation of the General Plan Update; Adoption and implementation of the Climate Action Plan; and Housing Element Update.

**Location:** The Project would apply to the entire geographic area located within the boundaries of the City of Palmdale. The City is located in the southern region of the Antelope Valley, approximately 60 miles northeast of downtown Los Angeles along State Highway 14.

## 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) Joshua tree. Joshua trees (*Yucca brevifolia*) are known to occur on vacant land within the City. Joshua tree is a CESA-listed candidate species. As a CESA-listed candidate species, western Joshua tree is granted full protection of a threatened species under CESA. Activities related to housing or infrastructure development may directly remove habitats or indirectly cause added pressures to the habitats in which these species reside, leading to further species decline. Any project activities that involve grading or vegetation removal would likely result in "take" or adverse impacts to western Joshua tree, its seed bank, and its sole pollinator, the Joshua tree yucca moth (*Tegeticula synthetica*).

Fish and Game Commission approved a Special Order (2084) on December 10, 2020, which delegated authority to the City of Palmdale for the issuance of some permits pertaining to new and existing single-family residences on behalf of CDFW. Special Order 749.11 authorizes the take of western Joshua trees during the candidacy period when a dead western Joshua tree needs to be removed or a western Joshua tree needs to be trimmed (CDFW 2021a). Special Order 749.12 authorizes the take of western Joshua trees by the City of Palmdale for certain projects pertaining to accessory structures in developed parcels within an existing single-family residence (CDFW 2021a). For this Project, take of western Joshua trees is not authorized by Special Order 749.11 or 749.12. Therefore, CDFW concurs, that the City require the Project Applicant to consult with CDFW for authorization to take western Joshua trees pursuant to Fish and Game Code section

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2080.1.

CDFW primarily recommends the City avoid impacts to western Joshua tree to the greatest extent feasible. If “take” or adverse impacts to western Joshua trees cannot be avoided during any project activities or over the life of the Project, the City should apply for a CESA Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2080 *et seq.* Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required to obtain a CESA Permit. The City should consult with CDFW to obtain additional Joshua tree survey requirements. CDFW may require separate CEQA documentation 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.

- 2) Additional CESA- and Endangered Species Act (ESA)-Covered Species. The City and its surrounding vicinity may support additional CESA- and ESA-listed species. Activities related to housing or infrastructure development may directly remove habitats or indirectly cause added pressures to the habitats in which these species reside, leading to further species decline. CDFW recommends the DEIR discuss the Project’s potential impacts on the following species and associated habitat: tricolored blackbird (*Agelaius tricolor*), Swainson’s hawk (*Buteo swainsoni*), and Mohave ground squirrel (*Xerspermophilus mohavensis*), which are CESA-listed; and least Bell’s vireo (*Vireo bellii pusillus*), which is ESA- and CESA-listed.

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 during the life of the Project 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 ITP or a consistency determination in certain circumstances Please refer to Specific Comment #1 regarding consultation with CDFW on ITPs.

- 3) Additional Special Status Species. The City and its surrounding vicinity may also support additional special status species, namely, those considered Species of Special Concern by CDFW. Activities related to housing or infrastructure development may directly remove habitats or indirectly cause added pressures to the habitats in which these species reside, leading to further species decline. CDFW recommends the DEIR discuss the Project’s potential impacts on the following species and associated habitat: northern California legless lizard (*Anniella pulchra*), California glossy snake (*Arizona elegans occidentalis*), burrowing owl (*Athene cunicularia*), mountain plover (*Charadrius montanus*), western pond turtle (*Emys marmorata*), loggerhead shrike (*Lanius ludovicianus*), coast horned lizard (*Phrynosoma blainvillii*), two-striped garter snake (*Thamnophis hammondi*), and Le Conte’s thrasher (*Toxostoma lecontei*).

- 4) Crotch’s Bumble Bee. The City and its surrounding vicinity may also support additional

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special status species, namely, Crotch's bumble bee (*Bombus crotchii*). Project activities related to housing or infrastructure development will involve ground disturbing activities in occupied habitat may result in loss of foraging habitat, crushing or filling of active bee colonies, causing the death or injury of adults, eggs, and larvae.

Crotch's bumble bee has a State ranking of S1/S2. This means that the Crotch's bumble bee is considered critically imperiled or imperiled and is extremely rare (often 5 or fewer populations). Also, Crotch's bumble bee has a very restricted range and steep population declines make the species vulnerable to extirpation from the State (CDFW 2017). Accordingly, Crotch's bumble bee meets the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). Therefore, take of Crotch's bumble bee could require a mandatory finding of significance by the City (CEQA Guidelines, § 15065). The Project's associated housing and infrastructure development activities have the potential to substantially reduce or adversely modify habitat, impair the viability of populations, and reduce the number and range of the Crotch's bumble bee. CDFW recommends the DEIR discuss the Project's potential impacts on the Crotch's bumble bee and associated habitat.

- 5) Biologically Significant Sites Inventory. CDFW recommends the City identify and prepare a map of the following areas if present within or adjacent to the City boundary. In addition, the City should consider the Project's potential impacts on the following areas if present within or adjacent to the Project boundary:
- a) Conservation easements or mitigation lands;
  - b) U.S. Fish and Wildlife Service [Threatened & Endangered Species Active Critical Habitat](#) (USFWS 2020);
  - c) County of Los Angeles Significant Ecological Areas (SEAs);
  - d) Wildlife corridors;
  - e) Sensitive Natural Communities [see General Comment #3 (Biological Baseline Assessment)];
  - f) Aquatic and riparian resources including (but not limited to) rivers, channels, streams, wetlands, and vernal pools, and associated natural plant communities; and
  - g) City parks and open space, particularly areas with undeveloped land.

CDFW recommends the City avoid sites that may have a direct or indirect impact on conservation easements or lands set aside as mitigation. CDFW recommends the DEIR include measures where future housing development or infrastructure facilitated by the Project mitigate (avoid if feasible) for impacts on biological resources occurring within SEAs and critical habitat, as well as mitigate for impacts on wildlife corridors, sensitive natural communities, aquatic and riparian resources, and urban forests.

- 6) Development and Conservation. To accommodate increased housing and infrastructure 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.

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City of Palmdale  
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2019).

- 7) Jurisdictional Waters. According to the US Fish and Wildlife Service (USFWS) [National Wetlands Inventory](#), there are multiple segments of streams running throughout the City (USFWS 2021). 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 provide written notification to CDFW pursuant to Fish and Game Code Section 1600 *et seq.*
- a) CDFW's issuance of a Lake and Streambed Alteration (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 information about LSA Notification (CDFW 2021f).
  - b) In the event the project area may support aquatic, riparian, and wetland habitats; a preliminary delineation of the streams and their associated riparian habitats should be included in the environmental document. The delineation should be conducted pursuant to the U.S. Fish and Wildlife Service (USFWS) wetland definition adopted by CDFW (Cowardin et al. 1970). 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.
  - c) In project areas which may support ephemeral or episodic streams, herbaceous vegetation, woody vegetation, and woodlands also serve to protect the integrity of these resources and help maintain natural sedimentation processes; therefore, CDFW recommends effective setbacks be established to maintain appropriately sized vegetated buffer areas adjoining ephemeral drainages.
  - d) Project-related changes in upstream and downstream drainage patterns, runoff, and sedimentation should be included and evaluated in the environmental document.
  - e) As part of the LSA Notification process, CDFW requests a hydrological evaluation of the 100, 50, 25, 10, 5, and 2-year frequency storm event for existing and proposed conditions. CDFW recommends the environmental document evaluate the results and address avoidance, minimization, and/or mitigation measures that may be necessary to reduce potential significant impacts.
- 8) Wetland Resources. According to the US Fish and Wildlife Service (USFWS) [National Wetlands Inventory](#), there are a number of wetland sites throughout the City (USFWS 2021). CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and

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Game Commission's (Commission) policies. The [Wetlands Resources](#) policy the Commission "...seek[s] to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California. Further, it is the policy of the Fish and Game Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values" (CFGF 2005).

- a) The Wetlands Resources policy provides a framework for maintaining wetland resources and establishes mitigation guidance. CDFW encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. These wetlands include, but are not limited to, those along Anaverde Creek, Amargosa Creek, Lake Palmdale, Little Rock Wash, Rogers Creek, and Pine Creek. CDFW encourages activities that would avoid the reduction of wetland acreage, function, or habitat values. Once avoidance and minimization measures have been exhausted, a project must include mitigation measures to assure a "no net loss" of either wetland habitat values, or acreage, for unavoidable impacts to wetland resources. Conversions include, but are not limited to, conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks, which preserve the riparian and aquatic values and functions for the benefit to on-site and off-site wildlife populations. CDFW recommends mitigation measures to compensate for unavoidable impacts be included in an environmental document and these measures should compensate for the loss of function and value.
  - b) The Fish and Game Commission's [Water policy](#) guides CDFW on the quantity and quality of the waters of this State that should be apportioned and maintained respectively so as to produce and sustain maximum numbers of fish and wildlife; to provide maximum protection and enhancement of fish and wildlife and their habitat; encourage and support programs to maintain or restore a high quality of the waters of this State; prevent the degradation thereof caused by pollution and contamination; and, endeavor to keep as much water as possible open and accessible to the public for the use and enjoyment of fish and wildlife (CFGF 1994). CDFW recommends avoidance of water practices and structures that use excessive amounts of water, and minimization of impacts that negatively affect water quality, to the extent feasible (Fish & G. Code, § 5650).
- 9) [Nesting Birds](#). The City supports habitats, such as Joshua tree woodland, that numerous bird species depend on. CDFW recommends the DEIR include measures where future housing and infrastructure development facilitated by the Project avoids potential impacts to nesting birds. 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

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City of Palmdale  
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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. Ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal should occur outside of 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 DEIR include measures where future housing 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.
- 10) Loss of Bird and Raptor Nesting and Foraging Habitat. Joshua tree woodland habitat in the City supports nesting birds, including sensitive and special status species. Development occurring adjacent to the wildlife urban interface and habitats such as Joshua tree woodland 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 DEIR analyze and discuss the Project's impacts on bird and raptor nesting and breeding habitat. Edge effects should also be analyzed and discussed. CDFW recommends the DEIR 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 DEIR 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 DEIR 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

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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.

## 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 the species (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, 15041). 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 prepare 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 (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). 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



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considers impacts to Species of Special Concern a significant direct and cumulative adverse effect without implementing appropriate avoid and/or mitigation measures. A project-level 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, S3 and S4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting [Vegetation Classification and Mapping Program - Natural Communities](#) webpage (CDFW 2021b);
- 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](#) (CNDDDB) in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat (CDFW 2021c). An assessment should include a nine-quadrangle search of the CNDDDB to determine a list of species potentially present at a project site. A lack of records in the CNDDDB 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



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- survey protocol for select species (CDFW 2021d). Acceptable species-specific survey procedures may be developed in consultation with CDFW and the U.S. Fish and Wildlife Service; 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.
  - g) A biological resources survey should include identification and delineation of any rivers, streams, and lakes and their associated natural plant communities/habitats. This includes any culverts, ditches, storm channels that may transport water, sediment, pollutants, and discharge into rivers, streams, and lakes.
- 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 [CNDDDB Field Survey Forms](#) (CDFW 2021e). The City should ensure data collected at a project-level has been 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 DEIR 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 (NCCP, 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 DEIR;
  - 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 on 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.

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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 DEIR; 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 DEIR:
- a) A complete discussion of the purpose and need for, and description of, the proposed Project;
  - b) CEQA Guidelines section 15126.6(a) states that 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 Project component 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).

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- 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) 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.
- 8) 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.
- 9) 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 Palmdale General Plan Update to assist the City of Palmdale in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Felicia Silva, Environmental Scientist, at [Felicia.Silva@wildlife.ca.gov](mailto:Felicia.Silva@wildlife.ca.gov) or (562) 292-8105.

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Sincerely,

DocuSigned by:



5991E19EF8094C3...

Victoria Tang signing for

Erinn Wilson-Olgin  
Environmental Program Manager I  
South Coast Region

ec: CDFW

Erinn Wilson-Olgin, Los Alamitos – [Erinn.Wilson-Olgin@wildlife.ca.gov](mailto:Erinn.Wilson-Olgin@wildlife.ca.gov)  
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CEQA Program Coordinator, Sacramento – [CEQACommentLetters@wildlife.ca.gov](mailto:CEQACommentLetters@wildlife.ca.gov)

State Clearinghouse, Office of Planning and Research – [State.Clearinghouse@opr.ca.gov](mailto:State.Clearinghouse@opr.ca.gov)

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July 28, 2021

Ms. Megan Taggart, Planning Manager
City of Palmdale, Department of Economic and Community Development
38250 Sierra Highway
Palmdale, California 93550
Phone: (661) 267-5213
E-mail: mtaggart@cityofpalmdale.org

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Palmdale 2045 General Plan Update [SCAG NO. IGR10425]

Dear Ms. Taggart,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Palmdale 2045 General Plan Update ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment.

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 staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Palmdale 2045 General Plan Update in Los Angeles County. The proposed project is a General Plan Update for 2020 – 2045 that covers the state-required nine topics and economic development, urban design, infrastructure, military readiness, community facilities, sustainability and resilience, and climate change.

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,

[Handwritten signature of Rongsheng Luo]

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.

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REGIONAL COUNCIL OFFICERS

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**COMMENTS ON THE NOTICE OF PREPARATION OF A  
DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE  
PALMDALE 2045 GENERAL PLAN UPDATE [SCAG NO. IGR10425]**

**CONSISTENCY WITH CONNECT SOCIAL**

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

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 SOCIAL GOALS   |   |
|---|---|
| Goal  | Analysis  |
| Goal #1: <i>Encourage regional economic prosperity and global competitiveness</i>                   | <i>Consistent: Statement as to why;<br/>Not-Consistent: Statement as to why;<br/>Or<br/>Not Applicable: Statement as to why;<br/>DEIR page number reference</i> |
| Goal #2: <i>Improve mobility, accessibility, reliability and travel safety for people and goods</i> | <i>Consistent: Statement as to why;<br/>Not-Consistent: Statement as to why;<br/>Or<br/>Not Applicable: Statement as to why;<br/>DEIR page number reference</i> |
| 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.

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 Palmdale 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 | 162,262                            | 179,535   | 188,171   | 207,047   |
| Households | 6,333,458                          | 6,902,821  | 7,170,110  | 7,633,451  | 45,820                             | 53,046    | 56,660    | 61,798    |
| Employment | 8,695,427                          | 9,303,627  | 9,566,384  | 10,048,822 | 38,610                             | 41,655    | 43,178    | 45,938    |

**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 [6<sup>th</sup> cycle Final Regional Housing Needs Assessment \(RHNA\) Allocation Plan](#) which covers the planning period October 2021 through October 2029. The 6<sup>th</sup> cycle Final RHNA allocation for the applicable jurisdiction is below.

| SCAG 6 <sup>th</sup> Cycle Final RHNA Allocation for City of Palmdale |       |
|---|-------|
| Very low income   | 1,777 |
| Low income  | 935   |
| Moderate income   | 1,004 |
| Above moderate income   | 2,924 |
| Total RHNA Allocation   | 6,640 |

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.

SCAG staff would like to call your attention to SCAG's [HELPR 2.0](#), a web-mapping tool developed by SCAG to help local jurisdictions and stakeholders understand local land use, site opportunities, and environmental sensitivities for aligning housing planning with the state Department of Housing and Community Development's (HCD) [6th cycle housing element requirements](#).

### **ENVIRONMENTAL JUSTICE**

Per [Senate Bill 1000](#) (SB 1000), local jurisdictions in California with disadvantaged communities are required to develop an Environmental Justice (EJ) Element or consider EJ goals, policies, and objectives in their General Plans when updating two or more General Plan Elements. SCAG staff recommends that you review the [Environmental Justice Technical Report](#) and the updated [Environmental Justice Toolbox](#), which is a resource document to assist local jurisdictions in developing EJ-related goals and policies regarding solutions for EJ-related community issues.

# Appendix B

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CalEEMod Modeling Outputs

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Palmdale GPU - General Office -Construction Only**

Los Angeles-Mojave Desert County, Annual

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses               | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------------|--------|----------|-------------|--------------------|------------|
| General Office Building | 171.28 | 1000sqft | 3.93        | 171,275.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |               |              |
|-------------------------|------------------------------|---------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 2/23/2023     | 12/28/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/4/2023      | 12/26/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/16/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseEndDate                 | 1/30/2023     | 3/3/2022     |
| tblConstructionPhase    | PhaseStartDate               | 1/31/2023     | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/17/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 2/5/2022      | 1/28/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/5/2023      | 2/8/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05      | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07     | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08     | 0            |
| tblEnergyUse            | LightingElect                | 3.77          | 0.00         |
| tblEnergyUse            | NT24E                        | 4.62          | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.39          | 0.00         |
| tblEnergyUse            | T24E                         | 4.11          | 0.00         |
| tblEnergyUse            | T24NG                        | 9.92          | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180           | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 159.29        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 2.21          | 0.00         |
| tblVehicleTrips         | SU_TR                        | 0.70          | 0.00         |
| tblVehicleTrips         | WD_TR                        | 9.74          | 0.00         |
| tblWater                | IndoorWaterUseRate           | 30,442,236.36 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 18,658,144.86 | 0.00         |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| 2022           | 0.8624        | 2.4231        | 2.5264        | 4.9600e-003        | 0.1048        | 0.1163        | 0.2211        | 0.0345         | 0.1092        | 0.1437        | 0.0000        | 438.1743        | 438.1743        | 0.0852        | 0.0107        | 443.4869        |
| <b>Maximum</b> | <b>0.8624</b> | <b>2.4231</b> | <b>2.5264</b> | <b>4.9600e-003</b> | <b>0.1048</b> | <b>0.1163</b> | <b>0.2211</b> | <b>0.0345</b>  | <b>0.1092</b> | <b>0.1437</b> | <b>0.0000</b> | <b>438.1743</b> | <b>438.1743</b> | <b>0.0852</b> | <b>0.0107</b> | <b>443.4869</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |               |                 |
| 2022           | 0.6623        | 0.3659        | 2.5294        | 4.6600e-003        | 0.0891        | 7.4200e-003        | 0.0966        | 0.0269         | 7.3200e-003        | 0.0343        | 0.0000        | 415.9099        | 415.9099        | 0.0826        | 0.0107        | 421.1561        |
| <b>Maximum</b> | <b>0.6623</b> | <b>0.3659</b> | <b>2.5294</b> | <b>4.6600e-003</b> | <b>0.0891</b> | <b>7.4200e-003</b> | <b>0.0966</b> | <b>0.0269</b>  | <b>7.3200e-003</b> | <b>0.0343</b> | <b>0.0000</b> | <b>415.9099</b> | <b>415.9099</b> | <b>0.0826</b> | <b>0.0107</b> | <b>421.1561</b> |

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





## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/28/2022  | 2/8/2022   | 5             | 8        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 12/26/2022 | 5             | 230      |                   |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|   |                       |                       |           |            |   |    |
|---|-----------------------|-----------------------|-----------|------------|---|----|
| 4 | Paving                | Paving                | 2/8/2022  | 3/3/2022   | 5 | 18 |
| 5 | Architectural Coating | Architectural Coating | 12/5/2022 | 12/28/2022 | 5 | 18 |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 256,913; Non-Residential Outdoor: 85,638; Striped Parking Area: 0  
(Architectural Coating – sqft)**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 2      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 1      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 1      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 6.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 6.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                       |         |   |      |    |      |
|-----------------------|---------|---|------|----|------|
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
|-----------------------|---------|---|------|----|------|

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 11.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 55.00              | 28.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 1.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

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

**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 |               |               |               |                    | 8.0000e-005        | 0.0000        | 8.0000e-005   | 1.0000e-005        | 0.0000        | 1.0000e-005   | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0264        | 0.2572        | 0.2059        | 3.9000e-004        |                    | 0.0124        | 0.0124        |                    | 0.0116        | 0.0116        | 0.0000        | 33.9902        | 33.9902        | 9.5500e-003        | 0.0000        | 34.2289        |
| <b>Total</b>  | <b>0.0264</b> | <b>0.2572</b> | <b>0.2059</b> | <b>3.9000e-004</b> | <b>8.0000e-005</b> | <b>0.0124</b> | <b>0.0125</b> | <b>1.0000e-005</b> | <b>0.0116</b> | <b>0.0116</b> | <b>0.0000</b> | <b>33.9902</b> | <b>33.9902</b> | <b>9.5500e-003</b> | <b>0.0000</b> | <b>34.2289</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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             | 9.0000e-005        | 2.0000e-005        | 0.0000             | 1.0000e-005        | 0.0000             | 1.0000e-005        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0309        | 0.0309        | 0.0000             | 0.0000             | 0.0324        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 4.3000e-004        | 3.3000e-004        | 4.2900e-003        | 1.0000e-005        | 1.2100e-003        | 1.0000e-005        | 1.2200e-003        | 3.2000e-004        | 1.0000e-005        | 3.3000e-004        | 0.0000        | 1.0003        | 1.0003        | 3.0000e-005        | 3.0000e-005        | 1.0099        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>4.2000e-004</b> | <b>4.3100e-003</b> | <b>1.0000e-005</b> | <b>1.2200e-003</b> | <b>1.0000e-005</b> | <b>1.2300e-003</b> | <b>3.2000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.0312</b> | <b>1.0312</b> | <b>3.0000e-005</b> | <b>3.0000e-005</b> | <b>1.0423</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 4.0000e-005        | 0.0000             | 4.0000e-005        | 1.0000e-005        | 0.0000             | 1.0000e-005        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 4.6200e-003        | 0.0200        | 0.2328        | 3.9000e-004        |                    | 6.2000e-004        | 6.2000e-004        |                    | 6.2000e-004        | 6.2000e-004        | 0.0000        | 33.9902        | 33.9902        | 9.5500e-003        | 0.0000        | 34.2289        |
| <b>Total</b>  | <b>4.6200e-003</b> | <b>0.0200</b> | <b>0.2328</b> | <b>3.9000e-004</b> | <b>4.0000e-005</b> | <b>6.2000e-004</b> | <b>6.6000e-004</b> | <b>1.0000e-005</b> | <b>6.2000e-004</b> | <b>6.3000e-004</b> | <b>0.0000</b> | <b>33.9902</b> | <b>33.9902</b> | <b>9.5500e-003</b> | <b>0.0000</b> | <b>34.2289</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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             | 9.0000e-005        | 2.0000e-005        | 0.0000             | 1.0000e-005        | 0.0000             | 1.0000e-005        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0309        | 0.0309        | 0.0000             | 0.0000             | 0.0324        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 4.3000e-004        | 3.3000e-004        | 4.2900e-003        | 1.0000e-005        | 1.2100e-003        | 1.0000e-005        | 1.2200e-003        | 3.2000e-004        | 1.0000e-005        | 3.3000e-004        | 0.0000        | 1.0003        | 1.0003        | 3.0000e-005        | 3.0000e-005        | 1.0099        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>4.2000e-004</b> | <b>4.3100e-003</b> | <b>1.0000e-005</b> | <b>1.2200e-003</b> | <b>1.0000e-005</b> | <b>1.2300e-003</b> | <b>3.2000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.0312</b> | <b>1.0312</b> | <b>3.0000e-005</b> | <b>3.0000e-005</b> | <b>1.0423</b> |

**3.3 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 |                    |               |               |                    | 0.0283        | 0.0000             | 0.0283        | 0.0137         | 0.0000             | 0.0137        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 7.7900e-003        | 0.0834        | 0.0611        | 1.2000e-004        |               | 3.7600e-003        | 3.7600e-003   |                | 3.4600e-003        | 3.4600e-003   | 0.0000        | 10.4219        | 10.4219        | 3.3700e-003        | 0.0000        | 10.5062        |
| <b>Total</b>  | <b>7.7900e-003</b> | <b>0.0834</b> | <b>0.0611</b> | <b>1.2000e-004</b> | <b>0.0283</b> | <b>3.7600e-003</b> | <b>0.0321</b> | <b>0.0137</b>  | <b>3.4600e-003</b> | <b>0.0172</b> | <b>0.0000</b> | <b>10.4219</b> | <b>10.4219</b> | <b>3.3700e-003</b> | <b>0.0000</b> | <b>10.5062</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 1.7000e-004        | 1.3000e-004        | 1.7200e-003        | 0.0000        | 4.8000e-004        | 0.0000        | 4.9000e-004        | 1.3000e-004        | 0.0000        | 1.3000e-004        | 0.0000        | 0.4001        | 0.4001        | 1.0000e-005        | 1.0000e-005        | 0.4040        |
| <b>Total</b> | <b>1.7000e-004</b> | <b>1.3000e-004</b> | <b>1.7200e-003</b> | <b>0.0000</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>4.9000e-004</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>0.4001</b> | <b>0.4001</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4040</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |                    |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |                    |               |                    | 0.0128        | 0.0000             | 0.0128        | 6.1600e-003        | 0.0000             | 6.1600e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 1.4500e-003        | 6.2900e-003        | 0.0710        | 1.2000e-004        |               | 1.9000e-004        | 1.9000e-004   |                    | 1.9000e-004        | 1.9000e-004        | 0.0000        | 10.4219        | 10.4219        | 3.3700e-003        | 0.0000        | 10.5062        |
| <b>Total</b>  | <b>1.4500e-003</b> | <b>6.2900e-003</b> | <b>0.0710</b> | <b>1.2000e-004</b> | <b>0.0128</b> | <b>1.9000e-004</b> | <b>0.0129</b> | <b>6.1600e-003</b> | <b>1.9000e-004</b> | <b>6.3500e-003</b> | <b>0.0000</b> | <b>10.4219</b> | <b>10.4219</b> | <b>3.3700e-003</b> | <b>0.0000</b> | <b>10.5062</b> |



Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 1.7000e-004        | 1.3000e-004        | 1.7200e-003        | 0.0000        | 4.8000e-004        | 0.0000        | 4.9000e-004        | 1.3000e-004        | 0.0000        | 1.3000e-004        | 0.0000        | 0.4001        | 0.4001        | 1.0000e-005        | 1.0000e-005        | 0.4040        |
| <b>Total</b> | <b>1.7000e-004</b> | <b>1.3000e-004</b> | <b>1.7200e-003</b> | <b>0.0000</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>4.9000e-004</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>1.3000e-004</b> | <b>0.0000</b> | <b>0.4001</b> | <b>0.4001</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4040</b> |

**3.4 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     | 0.1962        | 1.7958        | 1.8818        | 3.1000e-003        |               | 0.0930        | 0.0930        |                | 0.0875        | 0.0875        | 0.0000        | 266.4840        | 266.4840        | 0.0638        | 0.0000        | 268.0801        |
| <b>Total</b> | <b>0.1962</b> | <b>1.7958</b> | <b>1.8818</b> | <b>3.1000e-003</b> |               | <b>0.0930</b> | <b>0.0930</b> |                | <b>0.0875</b> | <b>0.0875</b> | <b>0.0000</b> | <b>266.4840</b> | <b>266.4840</b> | <b>0.0638</b> | <b>0.0000</b> | <b>268.0801</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 6.5300e-003   | 0.1730        | 0.0564        | 6.6000e-004        | 0.0215        | 1.5900e-003        | 0.0231        | 6.1900e-003    | 1.5200e-003        | 7.7200e-003   | 0.0000        | 64.7691         | 64.7691         | 2.1600e-003        | 9.3400e-003   | 67.6060         |
| Worker       | 0.0180        | 0.0141        | 0.1811        | 4.6000e-004        | 0.0509        | 3.4000e-004        | 0.0513        | 0.0135         | 3.1000e-004        | 0.0138        | 0.0000        | 42.1809         | 42.1809         | 1.4000e-003        | 1.2400e-003   | 42.5852         |
| <b>Total</b> | <b>0.0245</b> | <b>0.1871</b> | <b>0.2375</b> | <b>1.1200e-003</b> | <b>0.0724</b> | <b>1.9300e-003</b> | <b>0.0743</b> | <b>0.0197</b>  | <b>1.8300e-003</b> | <b>0.0216</b> | <b>0.0000</b> | <b>106.9500</b> | <b>106.9500</b> | <b>3.5600e-003</b> | <b>0.0106</b> | <b>110.1912</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0327        | 0.1415        | 1.8358        | 2.8000e-003        |               | 4.3500e-003        | 4.3500e-003        |                | 4.3500e-003        | 4.3500e-003        | 0.0000        | 244.8384        | 244.8384        | 0.0613        | 0.0000        | 246.3697        |
| <b>Total</b> | <b>0.0327</b> | <b>0.1415</b> | <b>1.8358</b> | <b>2.8000e-003</b> |               | <b>4.3500e-003</b> | <b>4.3500e-003</b> |                | <b>4.3500e-003</b> | <b>4.3500e-003</b> | <b>0.0000</b> | <b>244.8384</b> | <b>244.8384</b> | <b>0.0613</b> | <b>0.0000</b> | <b>246.3697</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 6.5300e-003   | 0.1730        | 0.0564        | 6.6000e-004        | 0.0215        | 1.5900e-003        | 0.0231        | 6.1900e-003    | 1.5200e-003        | 7.7200e-003   | 0.0000        | 64.7691         | 64.7691         | 2.1600e-003        | 9.3400e-003   | 67.6060         |
| Worker       | 0.0180        | 0.0141        | 0.1811        | 4.6000e-004        | 0.0509        | 3.4000e-004        | 0.0513        | 0.0135         | 3.1000e-004        | 0.0138        | 0.0000        | 42.1809         | 42.1809         | 1.4000e-003        | 1.2400e-003   | 42.5852         |
| <b>Total</b> | <b>0.0245</b> | <b>0.1871</b> | <b>0.2375</b> | <b>1.1200e-003</b> | <b>0.0724</b> | <b>1.9300e-003</b> | <b>0.0743</b> | <b>0.0197</b>  | <b>1.8300e-003</b> | <b>0.0216</b> | <b>0.0000</b> | <b>106.9500</b> | <b>106.9500</b> | <b>3.5600e-003</b> | <b>0.0106</b> | <b>110.1912</b> |

**3.5 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     | 8.7900e-003        | 0.0857        | 0.1098        | 1.7000e-004        |               | 4.3900e-003        | 4.3900e-003        |                | 4.0500e-003        | 4.0500e-003        | 0.0000        | 14.7383        | 14.7383        | 4.6300e-003        | 0.0000        | 14.8540        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>8.7900e-003</b> | <b>0.0857</b> | <b>0.1098</b> | <b>1.7000e-004</b> |               | <b>4.3900e-003</b> | <b>4.3900e-003</b> |                | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>0.0000</b> | <b>14.7383</b> | <b>14.7383</b> | <b>4.6300e-003</b> | <b>0.0000</b> | <b>14.8540</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 5.1000e-004        | 4.0000e-004        | 5.1500e-003        | 1.0000e-005        | 1.4500e-003        | 1.0000e-005        | 1.4600e-003        | 3.9000e-004        | 1.0000e-005        | 3.9000e-004        | 0.0000        | 1.2004        | 1.2004        | 4.0000e-005        | 4.0000e-005        | 1.2119        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>4.0000e-004</b> | <b>5.1500e-003</b> | <b>1.0000e-005</b> | <b>1.4500e-003</b> | <b>1.0000e-005</b> | <b>1.4600e-003</b> | <b>3.9000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.2004</b> | <b>1.2004</b> | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>1.2119</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 1.9700e-003        | 8.5600e-003        | 0.1218        | 1.6000e-004        |               | 2.6000e-004        | 2.6000e-004        |                | 2.6000e-004        | 2.6000e-004        | 0.0000        | 14.1196        | 14.1196        | 4.5700e-003        | 0.0000        | 14.2338        |
| Paving       | 0.0000             |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>1.9700e-003</b> | <b>8.5600e-003</b> | <b>0.1218</b> | <b>1.6000e-004</b> |               | <b>2.6000e-004</b> | <b>2.6000e-004</b> |                | <b>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>14.1196</b> | <b>14.1196</b> | <b>4.5700e-003</b> | <b>0.0000</b> | <b>14.2338</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 5.1000e-004        | 4.0000e-004        | 5.1500e-003        | 1.0000e-005        | 1.4500e-003        | 1.0000e-005        | 1.4600e-003        | 3.9000e-004        | 1.0000e-005        | 3.9000e-004        | 0.0000        | 1.2004        | 1.2004        | 4.0000e-005        | 4.0000e-005        | 1.2119        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>4.0000e-004</b> | <b>5.1500e-003</b> | <b>1.0000e-005</b> | <b>1.4500e-003</b> | <b>1.0000e-005</b> | <b>1.4600e-003</b> | <b>3.9000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.2004</b> | <b>1.2004</b> | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>1.2119</b> |

**3.6 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 | 0.5954        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.8400e-003   | 0.0127        | 0.0163        | 3.0000e-005        |               | 7.4000e-004        | 7.4000e-004        |                | 7.4000e-004        | 7.4000e-004        | 0.0000        | 2.2979        | 2.2979        | 1.5000e-004        | 0.0000        | 2.3017        |
| <b>Total</b>    | <b>0.5972</b> | <b>0.0127</b> | <b>0.0163</b> | <b>3.0000e-005</b> |               | <b>7.4000e-004</b> | <b>7.4000e-004</b> |                | <b>7.4000e-004</b> | <b>7.4000e-004</b> | <b>0.0000</b> | <b>2.2979</b> | <b>2.2979</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>2.3017</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 2.8000e-004        | 2.2000e-004        | 2.8300e-003        | 1.0000e-005        | 8.0000e-004        | 1.0000e-005        | 8.0000e-004        | 2.1000e-004        | 0.0000        | 2.2000e-004        | 0.0000        | 0.6602        | 0.6602        | 2.0000e-005        | 2.0000e-005        | 0.6666        |
| <b>Total</b> | <b>2.8000e-004</b> | <b>2.2000e-004</b> | <b>2.8300e-003</b> | <b>1.0000e-005</b> | <b>8.0000e-004</b> | <b>1.0000e-005</b> | <b>8.0000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>0.6602</b> | <b>0.6602</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.6666</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.5954        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 2.7000e-004   | 1.1600e-003        | 0.0165        | 3.0000e-005        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 2.2979        | 2.2979        | 1.5000e-004        | 0.0000        | 2.3017        |
| <b>Total</b>    | <b>0.5957</b> | <b>1.1600e-003</b> | <b>0.0165</b> | <b>3.0000e-005</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>2.2979</b> | <b>2.2979</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>2.3017</b> |





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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use                | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------------|-------------------------|----------|--------|-------------|------------|
|                         | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Office Building | 0.00                    | 0.00     | 0.00   |             |            |
| Total                   | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                         | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |

**4.4 Fleet Mix**

| Land Use                | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Office Building | 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



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated**

|                         | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use                | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| General Office Building | 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        |
| <b>Total</b>            |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                         | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| General Office Building | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>            |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
| Category    | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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 Not Applied**

**7.2 Water by Land Use**

**Unmitigated**

|                         | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                | Mgal               | tons/yr | MT/yr         |               |               |               |
| General Office Building | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>            |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated**

|                         | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                | Mgal               | tons/yr | MT/yr         |               |               |               |
| General Office Building | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>            |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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 Not Applied**

**8.2 Waste by Land Use**

**Unmitigated**

|                         | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                | tons           | tons/yr | MT/yr         |               |               |               |
| General Office Building | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>            |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                         | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                | tons           | tons/yr | MT/yr         |               |               |               |
| General Office Building | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>            |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Palmdale GPU - General Office -Construction Only**

Los Angeles-Mojave Desert County, Summer

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses               | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------------|--------|----------|-------------|--------------------|------------|
| General Office Building | 171.28 | 1000sqft | 3.93        | 171,275.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |               |              |
|-------------------------|------------------------------|---------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 2/23/2023     | 12/28/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/4/2023      | 12/26/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/16/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseEndDate                 | 1/30/2023     | 3/3/2022     |
| tblConstructionPhase    | PhaseStartDate               | 1/31/2023     | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/17/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 2/5/2022      | 1/28/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/5/2023      | 2/8/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05      | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07     | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08     | 0            |
| tblEnergyUse            | LightingElect                | 3.77          | 0.00         |
| tblEnergyUse            | NT24E                        | 4.62          | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.39          | 0.00         |
| tblEnergyUse            | T24E                         | 4.11          | 0.00         |
| tblEnergyUse            | T24NG                        | 9.92          | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180           | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 159.29        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 2.21          | 0.00         |
| tblVehicleTrips         | SU_TR                        | 0.70          | 0.00         |
| tblVehicleTrips         | WD_TR                        | 9.74          | 0.00         |
| tblWater                | IndoorWaterUseRate           | 30,442,236.36 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 18,658,144.86 | 0.00         |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****2.0 Emissions Summary****2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |                |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 68.3146        | 47.6035        | 47.0238        | 0.0881        | 8.0116        | 2.2562        | 10.2678        | 3.6755         | 2.0948        | 5.7702        | 0.0000        | 8,540.3337        | 8,540.3337        | 2.1502        | 0.1074        | 8,626.0849        |
| <b>Maximum</b> | <b>68.3146</b> | <b>47.6035</b> | <b>47.0238</b> | <b>0.0881</b> | <b>8.0116</b> | <b>2.2562</b> | <b>10.2678</b> | <b>3.6755</b>  | <b>2.0948</b> | <b>5.7702</b> | <b>0.0000</b> | <b>8,540.3337</b> | <b>8,540.3337</b> | <b>2.1502</b> | <b>0.1074</b> | <b>8,626.0849</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 66.7175        | 5.3659        | 50.4421        | 0.0845        | 4.1162        | 0.1342        | 4.2504        | 1.7919         | 0.1332        | 1.9251        | 0.0000        | 8,257.0815        | 8,257.0815        | 2.1175        | 0.1074        | 8,342.0154        |
| <b>Maximum</b> | <b>66.7175</b> | <b>5.3659</b> | <b>50.4421</b> | <b>0.0845</b> | <b>4.1162</b> | <b>0.1342</b> | <b>4.2504</b> | <b>1.7919</b>  | <b>0.1332</b> | <b>1.9251</b> | <b>0.0000</b> | <b>8,257.0815</b> | <b>8,257.0815</b> | <b>2.1175</b> | <b>0.1074</b> | <b>8,342.0154</b> |

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

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                   |      |       |       |      |       |       |       |       |       |       |      |      |      |      |      |      |
|-------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| Percent Reduction | 2.34 | 88.73 | -7.27 | 4.11 | 48.62 | 94.05 | 58.60 | 51.25 | 93.64 | 66.64 | 0.00 | 3.32 | 3.32 | 1.52 | 0.00 | 3.29 |
|-------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|

**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         | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |               | 0.0399        |
| Energy       | 0.0000             | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>6.0000e-005</b> | <b>0.0000</b>  | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.0399</b> |



Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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         | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |               | 0.0399        |
| Energy       | 0.0000             | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>6.0000e-005</b> | <b>0.0000</b>  | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.0399</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/28/2022  | 2/8/2022   | 5             | 8        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 12/26/2022 | 5             | 230      |                   |
| 4            | Paving                | Paving                | 2/8/2022   | 3/3/2022   | 5             | 18       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/28/2022 | 5             | 18       |                   |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 8****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 256,913; Non-Residential Outdoor: 85,638; Striped Parking Area: 0  
(Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 2      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 1      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 1      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 6.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 6.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

**Trips and VMT**

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

| 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 11.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 55.00              | 28.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 1.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

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

**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 |               |                |                |               | 8.4300e-003        | 0.0000        | 8.4300e-003   | 1.2800e-003        | 0.0000        | 1.2800e-003   |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |                    | 1.2427        | 1.2427        |                    | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>8.4300e-003</b> | <b>1.2427</b> | <b>1.2511</b> | <b>1.2800e-003</b> | <b>1.1553</b> | <b>1.1565</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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      | 2.3000e-004   | 8.4000e-003   | 1.9600e-003   | 3.0000e-005        | 8.8000e-004   | 6.0000e-005        | 9.4000e-004   | 2.4000e-004    | 6.0000e-005        | 3.0000e-004   |          | 3.4039          | 3.4039          | 1.8000e-004        | 5.4000e-004        | 3.5693          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0437</b> | <b>0.0381</b> | <b>0.4537</b> | <b>1.1600e-003</b> | <b>0.1241</b> | <b>8.7000e-004</b> | <b>0.1250</b> | <b>0.0329</b>  | <b>8.0000e-004</b> | <b>0.0337</b> |          | <b>118.0848</b> | <b>118.0848</b> | <b>3.7600e-003</b> | <b>3.5300e-003</b> | <b>119.2317</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO             | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|---------------|----------------|---------------|--------------------|---------------|---------------|--------------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |               |                |               |                    |               |               |                    |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |               |                |               | 3.7900e-003        | 0.0000        | 3.7900e-003   | 5.7000e-004        | 0.0000        | 5.7000e-004   |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |                    | 0.0616        | 0.0616        |                    | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>3.7900e-003</b> | <b>0.0616</b> | <b>0.0654</b> | <b>5.7000e-004</b> | <b>0.0616</b> | <b>0.0622</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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      | 2.3000e-004   | 8.4000e-003   | 1.9600e-003   | 3.0000e-005        | 8.8000e-004   | 6.0000e-005        | 9.4000e-004   | 2.4000e-004    | 6.0000e-005        | 3.0000e-004   |          | 3.4039          | 3.4039          | 1.8000e-004        | 5.4000e-004        | 3.5693          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0437</b> | <b>0.0381</b> | <b>0.4537</b> | <b>1.1600e-003</b> | <b>0.1241</b> | <b>8.7000e-004</b> | <b>0.1250</b> | <b>0.0329</b>  | <b>8.0000e-004</b> | <b>0.0337</b> |          | <b>118.0848</b> | <b>118.0848</b> | <b>3.7600e-003</b> | <b>3.5300e-003</b> | <b>119.2317</b> |

**3.3 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 |               |                |                |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 1.9486        | 20.8551        | 15.2727        | 0.0297        |               | 0.9409        | 0.9409        |                | 0.8656        | 0.8656        |          | 2,872.0464        | 2,872.0464        | 0.9289        |     | 2,895.2684        |
| <b>Total</b>  | <b>1.9486</b> | <b>20.8551</b> | <b>15.2727</b> | <b>0.0297</b> | <b>7.0826</b> | <b>0.9409</b> | <b>8.0234</b> | <b>3.4247</b>  | <b>0.8656</b> | <b>4.2903</b> |          | <b>2,872.0464</b> | <b>2,872.0464</b> | <b>0.9289</b> |     | <b>2,895.2684</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4517</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>114.6809</b> | <b>114.6809</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>115.6624</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.3632        | 1.5737        | 17.7527        | 0.0297        |               | 0.0484        | 0.0484        |                | 0.0484        | 0.0484        | 0.0000        | 2,872.0464        | 2,872.0464        | 0.9289        |     | 2,895.2684        |
| <b>Total</b>  | <b>0.3632</b> | <b>1.5737</b> | <b>17.7527</b> | <b>0.0297</b> | <b>3.1872</b> | <b>0.0484</b> | <b>3.2356</b> | <b>1.5411</b>  | <b>0.0484</b> | <b>1.5896</b> | <b>0.0000</b> | <b>2,872.0464</b> | <b>2,872.0464</b> | <b>0.9289</b> |     | <b>2,895.2684</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4517</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>114.6809</b> | <b>114.6809</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>115.6624</b> |

**3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0572        | 1.4323        | 0.4833        | 5.7800e-003        | 0.1897        | 0.0138        | 0.2035        | 0.0546         | 0.0132        | 0.0678        |          | 620.7386          | 620.7386          | 0.0207        | 0.0894        | 647.9009          |
| Worker       | 0.1595        | 0.1090        | 1.6563        | 4.1600e-003        | 0.4518        | 2.9600e-003   | 0.4548        | 0.1198         | 2.7300e-003   | 0.1226        |          | 420.4966          | 420.4966          | 0.0131        | 0.0110        | 424.0955          |
| <b>Total</b> | <b>0.2167</b> | <b>1.5413</b> | <b>2.1396</b> | <b>9.9400e-003</b> | <b>0.6415</b> | <b>0.0168</b> | <b>0.6583</b> | <b>0.1745</b>  | <b>0.0159</b> | <b>0.1904</b> |          | <b>1,041.2352</b> | <b>1,041.2352</b> | <b>0.0339</b> | <b>0.1004</b> | <b>1,071.9964</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 0.2840        | 1.2307        | 15.9634        | 0.0244        |               | 0.0379        | 0.0379        |                | 0.0379        | 0.0379        | 0.0000        | 2,346.8559        | 2,346.8559        | 0.5871        |     | 2,361.5338        |
| <b>Total</b> | <b>0.2840</b> | <b>1.2307</b> | <b>15.9634</b> | <b>0.0244</b> |               | <b>0.0379</b> | <b>0.0379</b> |                | <b>0.0379</b> | <b>0.0379</b> | <b>0.0000</b> | <b>2,346.8559</b> | <b>2,346.8559</b> | <b>0.5871</b> |     | <b>2,361.5338</b> |



## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0572        | 1.4323        | 0.4833        | 5.7800e-003        | 0.1897        | 0.0138        | 0.2035        | 0.0546         | 0.0132        | 0.0678        |          | 620.7386          | 620.7386          | 0.0207        | 0.0894        | 647.9009          |
| Worker       | 0.1595        | 0.1090        | 1.6563        | 4.1600e-003        | 0.4518        | 2.9600e-003   | 0.4548        | 0.1198         | 2.7300e-003   | 0.1226        |          | 420.4966          | 420.4966          | 0.0131        | 0.0110        | 424.0955          |
| <b>Total</b> | <b>0.2167</b> | <b>1.5413</b> | <b>2.1396</b> | <b>9.9400e-003</b> | <b>0.6415</b> | <b>0.0168</b> | <b>0.6583</b> | <b>0.1745</b>  | <b>0.0159</b> | <b>0.1904</b> |          | <b>1,041.2352</b> | <b>1,041.2352</b> | <b>0.0339</b> | <b>0.1004</b> | <b>1,071.9964</b> |

**3.5 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     | 0.9765        | 9.5221        | 12.1940        | 0.0189        |               | 0.4877        | 0.4877        |                | 0.4504        | 0.4504        |          | 1,805.1297        | 1,805.1297        | 0.5672        |     | 1,819.3091        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.9765</b> | <b>9.5221</b> | <b>12.1940</b> | <b>0.0189</b> |               | <b>0.4877</b> | <b>0.4877</b> |                | <b>0.4504</b> | <b>0.4504</b> |          | <b>1,805.1297</b> | <b>1,805.1297</b> | <b>0.5672</b> |     | <b>1,819.3091</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0580        | 0.0396        | 0.6023        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 152.9079        | 152.9079        | 4.7700e-003        | 3.9900e-003        | 154.2165        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0396</b> | <b>0.6023</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>152.9079</b> | <b>152.9079</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>154.2165</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 0.2194        | 0.9509        | 13.5323        | 0.0179        |               | 0.0293        | 0.0293        |                | 0.0293        | 0.0293        | 0.0000        | 1,729.3552        | 1,729.3552        | 0.5593        |     | 1,743.3379        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2194</b> | <b>0.9509</b> | <b>13.5323</b> | <b>0.0179</b> |               | <b>0.0293</b> | <b>0.0293</b> |                | <b>0.0293</b> | <b>0.0293</b> | <b>0.0000</b> | <b>1,729.3552</b> | <b>1,729.3552</b> | <b>0.5593</b> |     | <b>1,743.3379</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0580        | 0.0396        | 0.6023        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 152.9079        | 152.9079        | 4.7700e-003        | 3.9900e-003        | 154.2165        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0396</b> | <b>0.6023</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>152.9079</b> | <b>152.9079</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>154.2165</b> |

**3.6 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 | 66.1552        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>66.3598</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0319        | 0.0218        | 0.3313        | 8.3000e-004        | 0.0904        | 5.9000e-004        | 0.0910        | 0.0240         | 5.5000e-004        | 0.0245        |          | 84.0993        | 84.0993        | 2.6200e-003        | 2.2000e-003        | 84.8191        |
| <b>Total</b> | <b>0.0319</b> | <b>0.0218</b> | <b>0.3313</b> | <b>8.3000e-004</b> | <b>0.0904</b> | <b>5.9000e-004</b> | <b>0.0910</b> | <b>0.0240</b>  | <b>5.5000e-004</b> | <b>0.0245</b> |          | <b>84.0993</b> | <b>84.0993</b> | <b>2.6200e-003</b> | <b>2.2000e-003</b> | <b>84.8191</b> |

**Mitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |                    |                    |                |                    |                    | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 66.1552        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>66.1849</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0319        | 0.0218        | 0.3313        | 8.3000e-004        | 0.0904        | 5.9000e-004        | 0.0910        | 0.0240         | 5.5000e-004        | 0.0245        |          | 84.0993        | 84.0993        | 2.6200e-003        | 2.2000e-003        | 84.8191        |
| <b>Total</b> | <b>0.0319</b> | <b>0.0218</b> | <b>0.3313</b> | <b>8.3000e-004</b> | <b>0.0904</b> | <b>5.9000e-004</b> | <b>0.0910</b> | <b>0.0240</b>  | <b>5.5000e-004</b> | <b>0.0245</b> |          | <b>84.0993</b> | <b>84.0993</b> | <b>2.6200e-003</b> | <b>2.2000e-003</b> | <b>84.8191</b> |

**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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use                | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------------|-------------------------|----------|--------|-------------|------------|
|                         | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Office Building | 0.00                    | 0.00     | 0.00   |             |            |
| Total                   | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                         | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |

**4.4 Fleet Mix**

| Land Use                | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Office Building | 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

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                         | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Office Building | 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        |
| <b>Total</b>            |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated**

|                         | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Office Building | 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        |
| <b>Total</b>            |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

|             | ROG         | NOx         | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O | CO2e   |
|-------------|-------------|-------------|--------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-----|--------|
| Category    | lb/day      |             |        |        |               |              |             |                |               |             | lb/day   |           |           |             |     |        |
| Mitigated   | 1.6200e-003 | 1.6000e-004 | 0.0175 | 0.0000 |               | 6.0000e-005  | 6.0000e-005 |                | 6.0000e-005   | 6.0000e-005 |          | 0.0375    | 0.0375    | 1.0000e-004 |     | 0.0399 |
| Unmitigated | 1.6200e-003 | 1.6000e-004 | 0.0175 | 0.0000 |               | 6.0000e-005  | 6.0000e-005 |                | 6.0000e-005   | 6.0000e-005 |          | 0.0375    | 0.0375    | 1.0000e-004 |     | 0.0399 |



Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |     | 0.0399        |
| <b>Total</b>          | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> |               | <b>6.0000e-005</b> | <b>6.0000e-005</b> |                | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> |     | <b>0.0399</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |     | 0.0399        |
| <b>Total</b>          | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> |               | <b>6.0000e-005</b> | <b>6.0000e-005</b> |                | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> |     | <b>0.0399</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

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Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Palmdale GPU - General Office -Construction Only**

**Los Angeles-Mojave Desert County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses               | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------------|--------|----------|-------------|--------------------|------------|
| General Office Building | 171.28 | 1000sqft | 3.93        | 171,275.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |               |              |
|-------------------------|------------------------------|---------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 2/23/2023     | 12/28/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/4/2023      | 12/26/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/16/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseEndDate                 | 1/30/2023     | 3/3/2022     |
| tblConstructionPhase    | PhaseStartDate               | 1/31/2023     | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/17/2022     | 2/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 2/5/2022      | 1/28/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/5/2023      | 2/8/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05      | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07     | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08     | 0            |
| tblEnergyUse            | LightingElect                | 3.77          | 0.00         |
| tblEnergyUse            | NT24E                        | 4.62          | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.39          | 0.00         |
| tblEnergyUse            | T24E                         | 4.11          | 0.00         |
| tblEnergyUse            | T24NG                        | 9.92          | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180           | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 159.29        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 2.21          | 0.00         |
| tblVehicleTrips         | SU_TR                        | 0.70          | 0.00         |
| tblVehicleTrips         | WD_TR                        | 9.74          | 0.00         |
| tblWater                | IndoorWaterUseRate           | 30,442,236.36 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 18,658,144.86 | 0.00         |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****2.0 Emissions Summary****2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |                |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 68.3246        | 47.6811        | 46.8481        | 0.0877        | 8.0116        | 2.2562        | 10.2678        | 3.6755         | 2.0948        | 5.7703        | 0.0000        | 8,504.3791        | 8,504.3791        | 2.1508        | 0.1087        | 8,590.5437        |
| <b>Maximum</b> | <b>68.3246</b> | <b>47.6811</b> | <b>46.8481</b> | <b>0.0877</b> | <b>8.0116</b> | <b>2.2562</b> | <b>10.2678</b> | <b>3.6755</b>  | <b>2.0948</b> | <b>5.7703</b> | <b>0.0000</b> | <b>8,504.3791</b> | <b>8,504.3791</b> | <b>2.1508</b> | <b>0.1087</b> | <b>8,590.5437</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 66.7276        | 5.4436        | 50.2663        | 0.0841        | 4.1162        | 0.1343        | 4.2504        | 1.7919         | 0.1333        | 1.9251        | 0.0000        | 8,221.1269        | 8,221.1269        | 2.1181        | 0.1087        | 8,306.4742        |
| <b>Maximum</b> | <b>66.7276</b> | <b>5.4436</b> | <b>50.2663</b> | <b>0.0841</b> | <b>4.1162</b> | <b>0.1343</b> | <b>4.2504</b> | <b>1.7919</b>  | <b>0.1333</b> | <b>1.9251</b> | <b>0.0000</b> | <b>8,221.1269</b> | <b>8,221.1269</b> | <b>2.1181</b> | <b>0.1087</b> | <b>8,306.4742</b> |

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

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                          |      |       |       |      |       |       |       |       |       |       |      |      |      |      |      |      |
|--------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| <b>Percent Reduction</b> | 2.34 | 88.58 | -7.30 | 4.13 | 48.62 | 94.05 | 58.60 | 51.25 | 93.64 | 66.64 | 0.00 | 3.33 | 3.33 | 1.52 | 0.00 | 3.31 |
|--------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|

**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          |
|-----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|---------------|---------------|
| <b>Category</b> | lb/day             |                    |               |               |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |               |               |
| Area            | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |               | 0.0399        |
| Energy          | 0.0000             | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b>    | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>6.0000e-005</b> | <b>0.0000</b>  | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.0399</b> |



Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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         | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |               | 0.0399        |
| Energy       | 0.0000             | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>6.0000e-005</b> | <b>0.0000</b>  | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.0399</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/28/2022  | 2/8/2022   | 5             | 8        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 12/26/2022 | 5             | 230      |                   |
| 4            | Paving                | Paving                | 2/8/2022   | 3/3/2022   | 5             | 18       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/28/2022 | 5             | 18       |                   |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 8****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 256,913; Non-Residential Outdoor: 85,638; Striped Parking Area: 0  
(Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 2      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 1      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 1      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 6.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 6.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

**Trips and VMT**

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

| 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 11.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 55.00              | 28.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 1.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |                |                |               | 8.4300e-003        | 0.0000        | 8.4300e-003   | 1.2800e-003        | 0.0000        | 1.2800e-003   |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |                    | 1.2427        | 1.2427        |                    | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>8.4300e-003</b> | <b>1.2427</b> | <b>1.2511</b> | <b>1.2800e-003</b> | <b>1.1553</b> | <b>1.1565</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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      | 2.3000e-004   | 8.7400e-003   | 1.9900e-003   | 3.0000e-005        | 8.8000e-004   | 6.0000e-005        | 9.4000e-004   | 2.4000e-004    | 6.0000e-005        | 3.0000e-004   |          | 3.4049          | 3.4049          | 1.8000e-004        | 5.4000e-004        | 3.5704          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0462</b> | <b>0.0416</b> | <b>0.4217</b> | <b>1.1000e-003</b> | <b>0.1241</b> | <b>8.7000e-004</b> | <b>0.1250</b> | <b>0.0329</b>  | <b>8.0000e-004</b> | <b>0.0337</b> |          | <b>112.0565</b> | <b>112.0565</b> | <b>3.8600e-003</b> | <b>3.7400e-003</b> | <b>113.2670</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO             | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|---------------|----------------|---------------|--------------------|---------------|---------------|--------------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |               |                |               |                    |               |               |                    |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |               |                |               | 3.7900e-003        | 0.0000        | 3.7900e-003   | 5.7000e-004        | 0.0000        | 5.7000e-004   |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |                    | 0.0616        | 0.0616        |                    | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>3.7900e-003</b> | <b>0.0616</b> | <b>0.0654</b> | <b>5.7000e-004</b> | <b>0.0616</b> | <b>0.0622</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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      | 2.3000e-004   | 8.7400e-003   | 1.9900e-003   | 3.0000e-005        | 8.8000e-004   | 6.0000e-005        | 9.4000e-004   | 2.4000e-004    | 6.0000e-005        | 3.0000e-004   |          | 3.4049          | 3.4049          | 1.8000e-004        | 5.4000e-004        | 3.5704          |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0462</b> | <b>0.0416</b> | <b>0.4217</b> | <b>1.1000e-003</b> | <b>0.1241</b> | <b>8.7000e-004</b> | <b>0.1250</b> | <b>0.0329</b>  | <b>8.0000e-004</b> | <b>0.0337</b> |          | <b>112.0565</b> | <b>112.0565</b> | <b>3.8600e-003</b> | <b>3.7400e-003</b> | <b>113.2670</b> |

**3.3 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 |               |                |                |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 1.9486        | 20.8551        | 15.2727        | 0.0297        |               | 0.9409        | 0.9409        |                | 0.8656        | 0.8656        |          | 2,872.0464        | 2,872.0464        | 0.9289        |     | 2,895.2684        |
| <b>Total</b>  | <b>1.9486</b> | <b>20.8551</b> | <b>15.2727</b> | <b>0.0297</b> | <b>7.0826</b> | <b>0.9409</b> | <b>8.0234</b> | <b>3.4247</b>  | <b>0.8656</b> | <b>4.2903</b> |          | <b>2,872.0464</b> | <b>2,872.0464</b> | <b>0.9289</b> |     | <b>2,895.2684</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4198</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>108.6516</b> | <b>108.6516</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>109.6966</b> |

**Mitigated Construction On-Site**

|               | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category      | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Fugitive Dust |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.3632        | 1.5737        | 17.7527        | 0.0297        |               | 0.0484        | 0.0484        |                | 0.0484        | 0.0484        | 0.0000        | 2,872.0464        | 2,872.0464        | 0.9289        |     | 2,895.2684        |
| <b>Total</b>  | <b>0.3632</b> | <b>1.5737</b> | <b>17.7527</b> | <b>0.0297</b> | <b>3.1872</b> | <b>0.0484</b> | <b>3.2356</b> | <b>1.5411</b>  | <b>0.0484</b> | <b>1.5896</b> | <b>0.0000</b> | <b>2,872.0464</b> | <b>2,872.0464</b> | <b>0.9289</b> |     | <b>2,895.2684</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4198</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>108.6516</b> | <b>108.6516</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>109.6966</b> |

**3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0566        | 1.4912        | 0.4994        | 5.7800e-003        | 0.1897        | 0.0139        | 0.2036        | 0.0546         | 0.0133        | 0.0679        |          | 620.9598          | 620.9598          | 0.0207        | 0.0895        | 648.1542          |
| Worker       | 0.1684        | 0.1204        | 1.5391        | 3.9400e-003        | 0.4518        | 2.9600e-003   | 0.4548        | 0.1198         | 2.7300e-003   | 0.1226        |          | 398.3892          | 398.3892          | 0.0135        | 0.0117        | 402.2210          |
| <b>Total</b> | <b>0.2249</b> | <b>1.6116</b> | <b>2.0385</b> | <b>9.7200e-003</b> | <b>0.6415</b> | <b>0.0168</b> | <b>0.6583</b> | <b>0.1745</b>  | <b>0.0160</b> | <b>0.1904</b> |          | <b>1,019.3491</b> | <b>1,019.3491</b> | <b>0.0342</b> | <b>0.1013</b> | <b>1,050.3752</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 0.2840        | 1.2307        | 15.9634        | 0.0244        |               | 0.0379        | 0.0379        |                | 0.0379        | 0.0379        | 0.0000        | 2,346.8559        | 2,346.8559        | 0.5871        |     | 2,361.5338        |
| <b>Total</b> | <b>0.2840</b> | <b>1.2307</b> | <b>15.9634</b> | <b>0.0244</b> |               | <b>0.0379</b> | <b>0.0379</b> |                | <b>0.0379</b> | <b>0.0379</b> | <b>0.0000</b> | <b>2,346.8559</b> | <b>2,346.8559</b> | <b>0.5871</b> |     | <b>2,361.5338</b> |



Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0566        | 1.4912        | 0.4994        | 5.7800e-003        | 0.1897        | 0.0139        | 0.2036        | 0.0546         | 0.0133        | 0.0679        |          | 620.9598          | 620.9598          | 0.0207        | 0.0895        | 648.1542          |
| Worker       | 0.1684        | 0.1204        | 1.5391        | 3.9400e-003        | 0.4518        | 2.9600e-003   | 0.4548        | 0.1198         | 2.7300e-003   | 0.1226        |          | 398.3892          | 398.3892          | 0.0135        | 0.0117        | 402.2210          |
| <b>Total</b> | <b>0.2249</b> | <b>1.6116</b> | <b>2.0385</b> | <b>9.7200e-003</b> | <b>0.6415</b> | <b>0.0168</b> | <b>0.6583</b> | <b>0.1745</b>  | <b>0.0160</b> | <b>0.1904</b> |          | <b>1,019.3491</b> | <b>1,019.3491</b> | <b>0.0342</b> | <b>0.1013</b> | <b>1,050.3752</b> |

**3.5 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     | 0.9765        | 9.5221        | 12.1940        | 0.0189        |               | 0.4877        | 0.4877        |                | 0.4504        | 0.4504        |          | 1,805.1297        | 1,805.1297        | 0.5672        |     | 1,819.3091        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.9765</b> | <b>9.5221</b> | <b>12.1940</b> | <b>0.0189</b> |               | <b>0.4877</b> | <b>0.4877</b> |                | <b>0.4504</b> | <b>0.4504</b> |          | <b>1,805.1297</b> | <b>1,805.1297</b> | <b>0.5672</b> |     | <b>1,819.3091</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0612        | 0.0438        | 0.5597        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 144.8688        | 144.8688        | 4.9000e-003        | 4.2600e-003        | 146.2622        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5597</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>144.8688</b> | <b>144.8688</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>146.2622</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 0.2194        | 0.9509        | 13.5323        | 0.0179        |               | 0.0293        | 0.0293        |                | 0.0293        | 0.0293        | 0.0000        | 1,729.3552        | 1,729.3552        | 0.5593        |     | 1,743.3379        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2194</b> | <b>0.9509</b> | <b>13.5323</b> | <b>0.0179</b> |               | <b>0.0293</b> | <b>0.0293</b> |                | <b>0.0293</b> | <b>0.0293</b> | <b>0.0000</b> | <b>1,729.3552</b> | <b>1,729.3552</b> | <b>0.5593</b> |     | <b>1,743.3379</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0612        | 0.0438        | 0.5597        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 144.8688        | 144.8688        | 4.9000e-003        | 4.2600e-003        | 146.2622        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5597</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>144.8688</b> | <b>144.8688</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>146.2622</b> |

**3.6 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 | 66.1552        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>66.3598</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

## Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0337        | 0.0241        | 0.3078        | 7.9000e-004        | 0.0904        | 5.9000e-004        | 0.0910        | 0.0240         | 5.5000e-004        | 0.0245        |          | 79.6779        | 79.6779        | 2.7000e-003        | 2.3500e-003        | 80.4442        |
| <b>Total</b> | <b>0.0337</b> | <b>0.0241</b> | <b>0.3078</b> | <b>7.9000e-004</b> | <b>0.0904</b> | <b>5.9000e-004</b> | <b>0.0910</b> | <b>0.0240</b>  | <b>5.5000e-004</b> | <b>0.0245</b> |          | <b>79.6779</b> | <b>79.6779</b> | <b>2.7000e-003</b> | <b>2.3500e-003</b> | <b>80.4442</b> |

**Mitigated Construction On-Site**

|                 | ROG            | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O | CO2e            |
|-----------------|----------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|-----|-----------------|
| Category        | lb/day         |               |               |                    |               |                    |                    |                |                    |                    | lb/day        |                 |                 |               |     |                 |
| Archit. Coating | 66.1552        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>66.1849</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

Palmdale GPU - General Office -Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0337        | 0.0241        | 0.3078        | 7.9000e-004        | 0.0904        | 5.9000e-004        | 0.0910        | 0.0240         | 5.5000e-004        | 0.0245        |          | 79.6779        | 79.6779        | 2.7000e-003        | 2.3500e-003        | 80.4442        |
| <b>Total</b> | <b>0.0337</b> | <b>0.0241</b> | <b>0.3078</b> | <b>7.9000e-004</b> | <b>0.0904</b> | <b>5.9000e-004</b> | <b>0.0910</b> | <b>0.0240</b>  | <b>5.5000e-004</b> | <b>0.0245</b> |          | <b>79.6779</b> | <b>79.6779</b> | <b>2.7000e-003</b> | <b>2.3500e-003</b> | <b>80.4442</b> |

**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 | 0.0000 | 0.0000 | 0.0000 | 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 Not Applied**

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use                | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------------|-------------------------|----------|--------|-------------|------------|
|                         | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| General Office Building | 0.00                    | 0.00     | 0.00   |             |            |
| Total                   | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                         | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| General Office Building | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |

**4.4 Fleet Mix**

| Land Use                | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Office Building | 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

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                         | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Office Building | 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        |
| <b>Total</b>            |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated**

|                         | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| General Office Building | 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        |
| <b>Total</b>            |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

|             | ROG         | NOx         | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4         | N2O | CO2e   |
|-------------|-------------|-------------|--------|--------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|-----|--------|
| Category    | lb/day      |             |        |        |               |              |             |                |               |             | lb/day   |           |           |             |     |        |
| Mitigated   | 1.6200e-003 | 1.6000e-004 | 0.0175 | 0.0000 |               | 6.0000e-005  | 6.0000e-005 |                | 6.0000e-005   | 6.0000e-005 |          | 0.0375    | 0.0375    | 1.0000e-004 |     | 0.0399 |
| Unmitigated | 1.6200e-003 | 1.6000e-004 | 0.0175 | 0.0000 |               | 6.0000e-005  | 6.0000e-005 |                | 6.0000e-005   | 6.0000e-005 |          | 0.0375    | 0.0375    | 1.0000e-004 |     | 0.0399 |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |     | 0.0399        |
| <b>Total</b>          | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> |               | <b>6.0000e-005</b> | <b>6.0000e-005</b> |                | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> |     | <b>0.0399</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 1.6200e-003        | 1.6000e-004        | 0.0175        | 0.0000        |               | 6.0000e-005        | 6.0000e-005        |                | 6.0000e-005        | 6.0000e-005        |          | 0.0375        | 0.0375        | 1.0000e-004        |     | 0.0399        |
| <b>Total</b>          | <b>1.6200e-003</b> | <b>1.6000e-004</b> | <b>0.0175</b> | <b>0.0000</b> |               | <b>6.0000e-005</b> | <b>6.0000e-005</b> |                | <b>6.0000e-005</b> | <b>6.0000e-005</b> |          | <b>0.0375</b> | <b>0.0375</b> | <b>1.0000e-004</b> |     | <b>0.0399</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Government Office - Construction**

Los Angeles-Mojave Desert County, Annual

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                  | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------|------|----------|-------------|--------------------|------------|
| Government Office Building | 7.30 | 1000sqft | 0.17        | 7,300.00           | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately

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

Construction Off-road Equipment Mitigation - Water 2x daily based on AVAQMD regulations for dust control; not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 4.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate               | 6/22/2022     | 6/8/2022     |
| tblConstructionPhase    | PhaseEndDate               | 6/8/2022      | 6/7/2022     |
| tblConstructionPhase    | PhaseEndDate               | 1/19/2022     | 1/18/2022    |
| tblConstructionPhase    | PhaseEndDate               | 6/15/2022     | 1/25/2022    |
| tblConstructionPhase    | PhaseStartDate             | 6/16/2022     | 6/2/2022     |
| tblConstructionPhase    | PhaseStartDate             | 1/20/2022     | 1/19/2022    |
| tblConstructionPhase    | PhaseStartDate             | 1/18/2022     | 1/15/2022    |

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

|                       |                              |              |           |
|-----------------------|------------------------------|--------------|-----------|
| tblConstructionPhase  | PhaseStartDate               | 6/9/2022     | 1/19/2022 |
| tblConsumerProducts   | ROG_EF                       | 2.14E-05     | 0         |
| tblConsumerProducts   | ROG_EF_Degreaser             | 3.542E-07    | 0         |
| tblConsumerProducts   | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0         |
| tblEnergyUse          | LightingElect                | 3.77         | 0.00      |
| tblEnergyUse          | NT24E                        | 4.62         | 0.00      |
| tblEnergyUse          | NT24NG                       | 0.39         | 0.00      |
| tblEnergyUse          | T24E                         | 4.11         | 0.00      |
| tblEnergyUse          | T24NG                        | 9.92         | 0.00      |
| tblLandscapeEquipment | NumberSummerDays             | 180          | 0         |
| tblSolidWaste         | SolidWasteGenerationRate     | 6.79         | 0.00      |
| tblVehicleTrips       | WD_TR                        | 22.59        | 0.00      |
| tblWater              | IndoorWaterUseRate           | 1,450,215.71 | 0.00      |
| tblWater              | OutdoorWaterUseRate          | 888,841.88   | 0.00      |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O                | CO2e           |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|----------------|---------------|--------------------|----------------|
| Year           | tons/yr       |               |               |                    |               |               |               |                    |               |               | MT/yr         |                |                |               |                    |                |
| 2022           | 0.0672        | 0.4197        | 0.4304        | 7.1000e-004        | 0.0111        | 0.0218        | 0.0329        | 3.7100e-003        | 0.0201        | 0.0239        | 0.0000        | 62.8937        | 62.8937        | 0.0184        | 3.5000e-004        | 63.4574        |
| <b>Maximum</b> | <b>0.0672</b> | <b>0.4197</b> | <b>0.4304</b> | <b>7.1000e-004</b> | <b>0.0111</b> | <b>0.0218</b> | <b>0.0329</b> | <b>3.7100e-003</b> | <b>0.0201</b> | <b>0.0239</b> | <b>0.0000</b> | <b>62.8937</b> | <b>62.8937</b> | <b>0.0184</b> | <b>3.5000e-004</b> | <b>63.4574</b> |

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

**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    | 0.0499  | 0.2275 | 0.4483 | 7.1000e-004 | 6.2400e-003   | 0.0115       | 0.0178     | 2.0100e-003    | 0.0106        | 0.0126      | 0.0000   | 62.5500   | 62.5500   | 0.0184 | 3.5000e-004 | 63.1127 |
| Maximum | 0.0499  | 0.2275 | 0.4483 | 7.1000e-004 | 6.2400e-003   | 0.0115       | 0.0178     | 2.0100e-003    | 0.0106        | 0.0126      | 0.0000   | 62.5500   | 62.5500   | 0.0184 | 3.5000e-004 | 63.1127 |

|                   | ROG   | NOx   | CO    | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|-------|-------|-------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 25.70 | 45.79 | -4.16 | 0.00 | 43.83         | 47.20        | 46.07      | 45.82          | 47.22         | 47.02       | 0.00     | 0.55     | 0.55      | 0.22 | 0.00 | 0.54 |

| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1       | 1-1-2022   | 3-31-2022 | 0.2742                                       | 0.1564                                     |
| 2       | 4-1-2022   | 6-30-2022 | 0.2182                                       | 0.1249                                     |
|         |            | Highest   | 0.2742                                       | 0.1564                                     |

**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    |           |           |     |     |      |





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

**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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/14/2022 | 5             | 10       |                   |
| 2            | Grading               | Grading               | 1/15/2022  | 1/18/2022 | 5             | 2        |                   |
| 3            | Building Construction | Building Construction | 1/19/2022  | 6/7/2022  | 5             | 100      |                   |

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

|   |                       |                       |           |           |   |   |
|---|-----------------------|-----------------------|-----------|-----------|---|---|
| 4 | Paving                | Paving                | 1/19/2022 | 1/25/2022 | 5 | 5 |
| 5 | Architectural Coating | Architectural Coating | 6/2/2022  | 6/8/2022  | 5 | 5 |

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

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,950; Non-Residential Outdoor: 3,650; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 4      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 4.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 2      | 6.00        | 89          | 0.20        |
| Grading               | Graders                   | 1      | 6.00        | 187         | 0.41        |
| Paving                | Pavers                    | 1      | 7.00        | 130         | 0.42        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 1      | 1.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 6.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Demolition            | Tractors/Loaders/Backhoes | 2      | 6.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 1      | 7.00        | 97          | 0.37        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 7.00        | 97          | 0.37        |

**Trips and VMT**

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

| 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 0.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 5                       | 2.00               | 1.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 4                       | 10.00              | 0.00               | 33.00               | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 3                       | 8.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 7                       | 18.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |                    |               |               |                    | 3.5400e-003        | 0.0000             | 3.5400e-003        | 5.4000e-004        | 0.0000             | 5.4000e-004        | 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        |
| <b>Total</b>  | <b>3.5500e-003</b> | <b>0.0321</b> | <b>0.0374</b> | <b>6.0000e-005</b> | <b>3.5400e-003</b> | <b>1.6900e-003</b> | <b>5.2300e-003</b> | <b>5.4000e-004</b> | <b>1.6100e-003</b> | <b>2.1500e-003</b> | <b>0.0000</b> | <b>5.2068</b> | <b>5.2068</b> | <b>9.6000e-004</b> | <b>0.0000</b> | <b>5.2308</b> |

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

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 8.0000e-005        | 2.9200e-003        | 6.5000e-004        | 1.0000e-005        | 2.8000e-004        | 2.0000e-005        | 3.0000e-004        | 8.0000e-005        | 2.0000e-005        | 1.0000e-004        | 0.0000        | 1.0192        | 1.0192        | 5.0000e-005        | 1.6000e-004        | 1.0687        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 1.4000e-004        | 1.1000e-004        | 1.4300e-003        | 0.0000             | 4.0000e-004        | 0.0000             | 4.1000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 0.3356        | 0.3356        | 1.0000e-005        | 1.0000e-005        | 0.3388        |
| <b>Total</b> | <b>2.2000e-004</b> | <b>3.0300e-003</b> | <b>2.0800e-003</b> | <b>1.0000e-005</b> | <b>6.8000e-004</b> | <b>2.0000e-005</b> | <b>7.1000e-004</b> | <b>1.9000e-004</b> | <b>2.0000e-005</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.3548</b> | <b>1.3548</b> | <b>6.0000e-005</b> | <b>1.7000e-004</b> | <b>1.4075</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |               |               |                    | 1.5900e-003        | 0.0000             | 1.5900e-003        | 2.4000e-004        | 0.0000             | 2.4000e-004        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 2.0700e-003        | 0.0194        | 0.0383        | 6.0000e-005        |                    | 9.8000e-004        | 9.8000e-004        |                    | 9.0000e-004        | 9.0000e-004        | 0.0000        | 5.2068        | 5.2068        | 9.6000e-004        | 0.0000        | 5.2308        |
| <b>Total</b>  | <b>2.0700e-003</b> | <b>0.0194</b> | <b>0.0383</b> | <b>6.0000e-005</b> | <b>1.5900e-003</b> | <b>9.8000e-004</b> | <b>2.5700e-003</b> | <b>2.4000e-004</b> | <b>9.0000e-004</b> | <b>1.1400e-003</b> | <b>0.0000</b> | <b>5.2068</b> | <b>5.2068</b> | <b>9.6000e-004</b> | <b>0.0000</b> | <b>5.2308</b> |

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

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 8.0000e-005        | 2.9200e-003        | 6.5000e-004        | 1.0000e-005        | 2.8000e-004        | 2.0000e-005        | 3.0000e-004        | 8.0000e-005        | 2.0000e-005        | 1.0000e-004        | 0.0000        | 1.0192        | 1.0192        | 5.0000e-005        | 1.6000e-004        | 1.0687        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 1.4000e-004        | 1.1000e-004        | 1.4300e-003        | 0.0000             | 4.0000e-004        | 0.0000             | 4.1000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 0.3356        | 0.3356        | 1.0000e-005        | 1.0000e-005        | 0.3388        |
| <b>Total</b> | <b>2.2000e-004</b> | <b>3.0300e-003</b> | <b>2.0800e-003</b> | <b>1.0000e-005</b> | <b>6.8000e-004</b> | <b>2.0000e-005</b> | <b>7.1000e-004</b> | <b>1.9000e-004</b> | <b>2.0000e-005</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>1.3548</b> | <b>1.3548</b> | <b>6.0000e-005</b> | <b>1.7000e-004</b> | <b>1.4075</b> |

**3.3 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 |                    |               |                    |                    | 5.3100e-003        | 0.0000             | 5.3100e-003        | 2.5700e-003        | 0.0000             | 2.5700e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 1.0800e-003        | 0.0120        | 5.9400e-003        | 1.0000e-005        |                    | 5.2000e-004        | 5.2000e-004        |                    | 4.8000e-004        | 4.8000e-004        | 0.0000        | 1.2381        | 1.2381        | 4.0000e-004        | 0.0000        | 1.2482        |
| <b>Total</b>  | <b>1.0800e-003</b> | <b>0.0120</b> | <b>5.9400e-003</b> | <b>1.0000e-005</b> | <b>5.3100e-003</b> | <b>5.2000e-004</b> | <b>5.8300e-003</b> | <b>2.5700e-003</b> | <b>4.8000e-004</b> | <b>3.0500e-003</b> | <b>0.0000</b> | <b>1.2381</b> | <b>1.2381</b> | <b>4.0000e-004</b> | <b>0.0000</b> | <b>1.2482</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.0000e-005        | 2.0000e-005        | 2.3000e-004        | 0.0000        | 6.0000e-005        | 0.0000        | 6.0000e-005        | 2.0000e-005        | 0.0000        | 2.0000e-005        | 0.0000        | 0.0537        | 0.0537        | 0.0000        | 0.0000        | 0.0542        |
| <b>Total</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>2.3000e-004</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.0537</b> | <b>0.0537</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0542</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |                    |                    | 2.3900e-003        | 0.0000             | 2.3900e-003        | 1.1600e-003        | 0.0000             | 1.1600e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 8.3000e-004        | 8.3300e-003        | 6.8800e-003        | 1.0000e-005        |                    | 4.0000e-004        | 4.0000e-004        |                    | 3.7000e-004        | 3.7000e-004        | 0.0000        | 1.2381        | 1.2381        | 4.0000e-004        | 0.0000        | 1.2482        |
| <b>Total</b>  | <b>8.3000e-004</b> | <b>8.3300e-003</b> | <b>6.8800e-003</b> | <b>1.0000e-005</b> | <b>2.3900e-003</b> | <b>4.0000e-004</b> | <b>2.7900e-003</b> | <b>1.1600e-003</b> | <b>3.7000e-004</b> | <b>1.5300e-003</b> | <b>0.0000</b> | <b>1.2381</b> | <b>1.2381</b> | <b>4.0000e-004</b> | <b>0.0000</b> | <b>1.2482</b> |

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

**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       | 2.0000e-005        | 2.0000e-005        | 2.3000e-004        | 0.0000        | 6.0000e-005        | 0.0000        | 6.0000e-005        | 2.0000e-005        | 0.0000        | 2.0000e-005        | 0.0000        | 0.0537        | 0.0537        | 0.0000        | 0.0000        | 0.0542        |
| <b>Total</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>2.3000e-004</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>6.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.0537</b> | <b>0.0537</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0542</b> |

**3.4 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        |
| <b>Total</b> | <b>0.0343</b> | <b>0.3513</b> | <b>0.3576</b> | <b>5.7000e-004</b> |               | <b>0.0186</b> | <b>0.0186</b> |                | <b>0.0171</b> | <b>0.0171</b> | <b>0.0000</b> | <b>50.0739</b> | <b>50.0739</b> | <b>0.0162</b> | <b>0.0000</b> | <b>50.4787</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.0000e-004        | 2.6900e-003        | 8.8000e-004        | 1.0000e-005        | 3.3000e-004        | 2.0000e-005        | 3.6000e-004        | 1.0000e-004        | 2.0000e-005        | 1.2000e-004        | 0.0000        | 1.0057        | 1.0057        | 3.0000e-005        | 1.5000e-004        | 1.0498        |
| Worker       | 2.8000e-004        | 2.2000e-004        | 2.8700e-003        | 1.0000e-005        | 8.1000e-004        | 1.0000e-005        | 8.1000e-004        | 2.1000e-004        | 0.0000             | 2.2000e-004        | 0.0000        | 0.6712        | 0.6712        | 2.0000e-005        | 2.0000e-005        | 0.6776        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.9100e-003</b> | <b>3.7500e-003</b> | <b>2.0000e-005</b> | <b>1.1400e-003</b> | <b>3.0000e-005</b> | <b>1.1700e-003</b> | <b>3.1000e-004</b> | <b>2.0000e-005</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>1.6769</b> | <b>1.6769</b> | <b>5.0000e-005</b> | <b>1.7000e-004</b> | <b>1.7274</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0197        | 0.1814        | 0.3759        | 5.7000e-004        |               | 9.4400e-003        | 9.4400e-003        |                | 8.7200e-003        | 8.7200e-003        | 0.0000        | 50.0738        | 50.0738        | 0.0162        | 0.0000        | 50.4787        |
| <b>Total</b> | <b>0.0197</b> | <b>0.1814</b> | <b>0.3759</b> | <b>5.7000e-004</b> |               | <b>9.4400e-003</b> | <b>9.4400e-003</b> |                | <b>8.7200e-003</b> | <b>8.7200e-003</b> | <b>0.0000</b> | <b>50.0738</b> | <b>50.0738</b> | <b>0.0162</b> | <b>0.0000</b> | <b>50.4787</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.0000e-004        | 2.6900e-003        | 8.8000e-004        | 1.0000e-005        | 3.3000e-004        | 2.0000e-005        | 3.6000e-004        | 1.0000e-004        | 2.0000e-005        | 1.2000e-004        | 0.0000        | 1.0057        | 1.0057        | 3.0000e-005        | 1.5000e-004        | 1.0498        |
| Worker       | 2.8000e-004        | 2.2000e-004        | 2.8700e-003        | 1.0000e-005        | 8.1000e-004        | 1.0000e-005        | 8.1000e-004        | 2.1000e-004        | 0.0000             | 2.2000e-004        | 0.0000        | 0.6712        | 0.6712        | 2.0000e-005        | 2.0000e-005        | 0.6776        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.9100e-003</b> | <b>3.7500e-003</b> | <b>2.0000e-005</b> | <b>1.1400e-003</b> | <b>3.0000e-005</b> | <b>1.1700e-003</b> | <b>3.1000e-004</b> | <b>2.0000e-005</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>1.6769</b> | <b>1.6769</b> | <b>5.0000e-005</b> | <b>1.7000e-004</b> | <b>1.7274</b> |

**3.5 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        |
| <b>Total</b> | <b>1.6200e-003</b> | <b>0.0148</b> | <b>0.0176</b> | <b>3.0000e-005</b> |               | <b>7.4000e-004</b> | <b>7.4000e-004</b> |                | <b>6.9000e-004</b> | <b>6.9000e-004</b> | <b>0.0000</b> | <b>2.3492</b> | <b>2.3492</b> | <b>6.8000e-004</b> | <b>0.0000</b> | <b>2.3663</b> |

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|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 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       | 1.3000e-004        | 1.0000e-004        | 1.2900e-003        | 0.0000        | 3.6000e-004        | 0.0000        | 3.6000e-004        | 1.0000e-004        | 0.0000        | 1.0000e-004        | 0.0000        | 0.3020        | 0.3020        | 1.0000e-005        | 1.0000e-005        | 0.3049        |
| <b>Total</b> | <b>1.3000e-004</b> | <b>1.0000e-004</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>3.6000e-004</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.3020</b> | <b>0.3020</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.3049</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 1.1800e-003        | 0.0120        | 0.0153        | 2.0000e-005        |               | 6.3000e-004        | 6.3000e-004        |                | 5.8000e-004        | 5.8000e-004        | 0.0000        | 2.0055        | 2.0055        | 6.5000e-004        | 0.0000        | 2.0217        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>1.1800e-003</b> | <b>0.0120</b> | <b>0.0153</b> | <b>2.0000e-005</b> |               | <b>6.3000e-004</b> | <b>6.3000e-004</b> |                | <b>5.8000e-004</b> | <b>5.8000e-004</b> | <b>0.0000</b> | <b>2.0055</b> | <b>2.0055</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>2.0217</b> |

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|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 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       | 1.3000e-004        | 1.0000e-004        | 1.2900e-003        | 0.0000        | 3.6000e-004        | 0.0000        | 3.6000e-004        | 1.0000e-004        | 0.0000        | 1.0000e-004        | 0.0000        | 0.3020        | 0.3020        | 1.0000e-005        | 1.0000e-005        | 0.3049        |
| <b>Total</b> | <b>1.3000e-004</b> | <b>1.0000e-004</b> | <b>1.2900e-003</b> | <b>0.0000</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>3.6000e-004</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>1.0000e-004</b> | <b>0.0000</b> | <b>0.3020</b> | <b>0.3020</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.3049</b> |

**3.6 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 | 0.0254        |                    |                    |                    |               | 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        |
| <b>Total</b>    | <b>0.0259</b> | <b>3.5200e-003</b> | <b>4.5300e-003</b> | <b>1.0000e-005</b> |               | <b>2.0000e-004</b> | <b>2.0000e-004</b> |                | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>0.6383</b> | <b>0.6383</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.6394</b> |

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

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO                 | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |                    |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.0254        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 7.0000e-005   | 3.2000e-004        | 4.5800e-003        | 1.0000e-005        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        | 0.0000        | 0.6383        | 0.6383        | 4.0000e-005        | 0.0000        | 0.6394        |
| <b>Total</b>    | <b>0.0255</b> | <b>3.2000e-004</b> | <b>4.5800e-003</b> | <b>1.0000e-005</b> |               | <b>1.0000e-005</b> | <b>1.0000e-005</b> |                | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.6383</b> | <b>0.6383</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.6394</b> |



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

**4.2 Trip Summary Information**

| Land Use                   | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------------|-------------------------|----------|--------|-------------|------------|
|                            | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Government Office Building | 0.00                    | 0.00     | 0.00   |             |            |
| Total                      | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Government Office Building | 9.50       | 7.30       | 7.30        | 33.00      | 62.00      | 5.00        | 50             | 34       | 16      |

**4.4 Fleet Mix**

| Land Use                   | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Government Office Building | 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



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**Mitigated**

|                            | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use                   | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Government Office Building | 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        |
| <b>Total</b>               |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                            | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                   | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Government Office Building | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>               |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |







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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
| Category    | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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****7.2 Water by Land Use****Unmitigated**

|                            | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                   | Mgal               | tons/yr | MT/yr         |               |               |               |
| Government Office Building | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>               |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

|                            | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                   | Mgal               | tons/yr | MT/yr         |               |               |               |
| Government Office Building | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>               |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail****8.1 Mitigation Measures Waste****Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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**

**8.2 Waste by Land Use**

**Unmitigated**

|                            | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                   | tons           | tons/yr | MT/yr         |               |               |               |
| Government Office Building | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>               |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                            | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                   | tons           | tons/yr | MT/yr         |               |               |               |
| Government Office Building | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>               |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Government Office - Construction**

Los Angeles-Mojave Desert County, Summer

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                  | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------|------|----------|-------------|--------------------|------------|
| Government Office Building | 7.30 | 1000sqft | 0.17        | 7,300.00           | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



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

Construction Off-road Equipment Mitigation - Water 2x daily based on AVAQMD regulations for dust control; not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 4.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate               | 6/22/2022     | 6/8/2022     |
| tblConstructionPhase    | PhaseEndDate               | 6/8/2022      | 6/7/2022     |
| tblConstructionPhase    | PhaseEndDate               | 1/19/2022     | 1/18/2022    |
| tblConstructionPhase    | PhaseEndDate               | 6/15/2022     | 1/25/2022    |
| tblConstructionPhase    | PhaseStartDate             | 6/16/2022     | 6/2/2022     |
| tblConstructionPhase    | PhaseStartDate             | 1/20/2022     | 1/19/2022    |
| tblConstructionPhase    | PhaseStartDate             | 1/18/2022     | 1/15/2022    |

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

|                       |                              |              |           |
|-----------------------|------------------------------|--------------|-----------|
| tblConstructionPhase  | PhaseStartDate               | 6/9/2022     | 1/19/2022 |
| tblConsumerProducts   | ROG_EF                       | 2.14E-05     | 0         |
| tblConsumerProducts   | ROG_EF_Degreaser             | 3.542E-07    | 0         |
| tblConsumerProducts   | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0         |
| tblEnergyUse          | LightingElect                | 3.77         | 0.00      |
| tblEnergyUse          | NT24E                        | 4.62         | 0.00      |
| tblEnergyUse          | NT24NG                       | 0.39         | 0.00      |
| tblEnergyUse          | T24E                         | 4.11         | 0.00      |
| tblEnergyUse          | T24NG                        | 9.92         | 0.00      |
| tblLandscapeEquipment | NumberSummerDays             | 180          | 0         |
| tblSolidWaste         | SolidWasteGenerationRate     | 6.79         | 0.00      |
| tblVehicleTrips       | WD_TR                        | 22.59        | 0.00      |
| tblWater              | IndoorWaterUseRate           | 1,450,215.71 | 0.00      |
| tblWater              | OutdoorWaterUseRate          | 888,841.88   | 0.00      |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 11.0493        | 13.0340        | 14.8079        | 0.0244        | 5.3777        | 0.6696        | 5.8954        | 2.5860         | 0.6195        | 3.0623        | 0.0000        | 2,315.8301        | 2,315.8301        | 0.6643        | 0.0376        | 2,334.5779        |
| <b>Maximum</b> | <b>11.0493</b> | <b>13.0340</b> | <b>14.8079</b> | <b>0.0244</b> | <b>5.3777</b> | <b>0.6696</b> | <b>5.8954</b> | <b>2.5860</b>  | <b>0.6195</b> | <b>3.0623</b> | <b>0.0000</b> | <b>2,315.8301</b> | <b>2,315.8301</b> | <b>0.6643</b> | <b>0.0376</b> | <b>2,334.5779</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

**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    | 10.5813 | 8.5310 | 14.2477 | 0.0223 | 2.4561        | 0.4434       | 2.8565     | 1.1733         | 0.4087        | 1.5423      | 0.0000   | 2,164.2812 | 2,164.2812 | 0.6485 | 0.0376 | 2,182.6357 |
| Maximum | 10.5813 | 8.5310 | 14.2477 | 0.0223 | 2.4561        | 0.4434       | 2.8565     | 1.1733         | 0.4087        | 1.5423      | 0.0000   | 2,164.2812 | 2,164.2812 | 0.6485 | 0.0376 | 2,182.6357 |

|                   | ROG  | NOx   | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 4.24 | 34.55 | 3.78 | 8.77 | 54.33         | 33.77        | 51.55      | 54.63          | 34.03         | 49.63       | 0.00     | 6.54     | 6.54      | 2.37 | 0.00 | 6.51 |

**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     | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |        | 1.7000e-003 |
| Energy   | 0.0000      | 0.0000      | 0.0000      | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000      |
| Mobile   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000      |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

|       |             |             |             |        |        |        |        |        |        |        |        |             |             |        |        |             |
|-------|-------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|--------|-------------|
| Total | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.6000e-003 | 1.6000e-003 | 0.0000 | 0.0000 | 1.7000e-003 |
|-------|-------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|--------|-------------|

**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         | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |               | 1.7000e-003        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| <b>Total</b> | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.7000e-003</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/14/2022 | 5             | 10       |                   |
| 2            | Grading               | Grading               | 1/15/2022  | 1/18/2022 | 5             | 2        |                   |
| 3            | Building Construction | Building Construction | 1/19/2022  | 6/7/2022  | 5             | 100      |                   |
| 4            | Paving                | Paving                | 1/19/2022  | 1/25/2022 | 5             | 5        |                   |
| 5            | Architectural Coating | Architectural Coating | 6/2/2022   | 6/8/2022  | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1.5****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,950; Non-Residential Outdoor: 3,650; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 4      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 4.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 2      | 6.00        | 89          | 0.20        |
| Grading               | Graders                  | 1      | 6.00        | 187         | 0.41        |



Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

| Category     | lb/day        |               |               |               |               |               |               |               |               |               | lb/day |                   |                   |               |  |                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|-------------------|-------------------|---------------|--|-------------------|
|              | Fugitive Dust |               |               |               |               | 0.7087        | 0.0000        | 0.7087        | 0.1073        | 0.0000        | 0.1073 |                   |                   | 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        |
| <b>Total</b> | <b>0.7094</b> | <b>6.4138</b> | <b>7.4693</b> | <b>0.0120</b> | <b>0.7087</b> | <b>0.3375</b> | <b>1.0463</b> | <b>0.1073</b> | <b>0.3225</b> | <b>0.4299</b> |        | <b>1,147.9025</b> | <b>1,147.9025</b> | <b>0.2119</b> |  | <b>1,153.2001</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0154        | 0.5542        | 0.1292        | 2.0500e-003        | 0.0578        | 4.1200e-003        | 0.0619        | 0.0158         | 3.9400e-003        | 0.0198        |          | 224.6560        | 224.6560        | 0.0119        | 0.0356        | 235.5763        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485         | 76.9485         | 2.3800e-003   | 2.0000e-003   | 77.6028         |
| <b>Total</b> | <b>0.0444</b> | <b>0.5741</b> | <b>0.4308</b> | <b>2.8100e-003</b> | <b>0.1399</b> | <b>4.6600e-003</b> | <b>0.1446</b> | <b>0.0376</b>  | <b>4.4400e-003</b> | <b>0.0421</b> |          | <b>301.6045</b> | <b>301.6045</b> | <b>0.0143</b> | <b>0.0376</b> | <b>313.1792</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |               |               | 0.3189        | 0.0000        | 0.3189        | 0.0483         | 0.0000        | 0.0483        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4143        | 3.8838        | 7.6633        | 0.0120        |               | 0.1957        | 0.1957        |                | 0.1807        | 0.1807        | 0.0000        | 1,147.9025        | 1,147.9025        | 0.2119        |     | 1,153.2001        |
| <b>Total</b>  | <b>0.4143</b> | <b>3.8838</b> | <b>7.6633</b> | <b>0.0120</b> | <b>0.3189</b> | <b>0.1957</b> | <b>0.5146</b> | <b>0.0483</b>  | <b>0.1807</b> | <b>0.2290</b> | <b>0.0000</b> | <b>1,147.9025</b> | <b>1,147.9025</b> | <b>0.2119</b> |     | <b>1,153.2001</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0154        | 0.5542        | 0.1292        | 2.0500e-003        | 0.0578        | 4.1200e-003        | 0.0619        | 0.0158         | 3.9400e-003        | 0.0198        |          | 224.6560        | 224.6560        | 0.0119        | 0.0356        | 235.5763        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485         | 76.9485         | 2.3800e-003   | 2.0000e-003   | 77.6028         |
| <b>Total</b> | <b>0.0444</b> | <b>0.5741</b> | <b>0.4308</b> | <b>2.8100e-003</b> | <b>0.1399</b> | <b>4.6600e-003</b> | <b>0.1446</b> | <b>0.0376</b>  | <b>4.4400e-003</b> | <b>0.0421</b> |          | <b>301.6045</b> | <b>301.6045</b> | <b>0.0143</b> | <b>0.0376</b> | <b>313.1792</b> |



## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 5.3119        | 0.0000        | 5.3119        | 2.5686         | 0.0000        | 2.5686        |          |                   | 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        |
| <b>Total</b>  | <b>1.0832</b> | <b>12.0046</b> | <b>5.9360</b> | <b>0.0141</b> | <b>5.3119</b> | <b>0.5173</b> | <b>5.8292</b> | <b>2.5686</b>  | <b>0.4759</b> | <b>3.0445</b> |          | <b>1,364.8198</b> | <b>1,364.8198</b> | <b>0.4414</b> |     | <b>1,375.8551</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0232        | 0.0159        | 0.2413        | 6.1000e-004        | 0.0657        | 4.3000e-004        | 0.0662        | 0.0174         | 4.0000e-004        | 0.0178        |          | 61.5588        | 61.5588        | 1.9100e-003        | 1.6000e-003        | 62.0823        |
| <b>Total</b> | <b>0.0232</b> | <b>0.0159</b> | <b>0.2413</b> | <b>6.1000e-004</b> | <b>0.0657</b> | <b>4.3000e-004</b> | <b>0.0662</b> | <b>0.0174</b>  | <b>4.0000e-004</b> | <b>0.0178</b> |          | <b>61.5588</b> | <b>61.5588</b> | <b>1.9100e-003</b> | <b>1.6000e-003</b> | <b>62.0823</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |               |               | 2.3904        | 0.0000        | 2.3904        | 1.1559         | 0.0000        | 1.1559        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.8328        | 8.3251        | 6.8759        | 0.0141        |               | 0.4000        | 0.4000        |                | 0.3686        | 0.3686        | 0.0000        | 1,364.8198        | 1,364.8198        | 0.4414        |     | 1,375.8551        |
| <b>Total</b>  | <b>0.8328</b> | <b>8.3251</b> | <b>6.8759</b> | <b>0.0141</b> | <b>2.3904</b> | <b>0.4000</b> | <b>2.7904</b> | <b>1.1559</b>  | <b>0.3686</b> | <b>1.5245</b> | <b>0.0000</b> | <b>1,364.8198</b> | <b>1,364.8198</b> | <b>0.4414</b> |     | <b>1,375.8551</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0232        | 0.0159        | 0.2413        | 6.1000e-004        | 0.0657        | 4.3000e-004        | 0.0662        | 0.0174         | 4.0000e-004        | 0.0178        |          | 61.5588        | 61.5588        | 1.9100e-003        | 1.6000e-003        | 62.0823        |
| <b>Total</b> | <b>0.0232</b> | <b>0.0159</b> | <b>0.2413</b> | <b>6.1000e-004</b> | <b>0.0657</b> | <b>4.3000e-004</b> | <b>0.0662</b> | <b>0.0174</b>  | <b>4.0000e-004</b> | <b>0.0178</b> |          | <b>61.5588</b> | <b>61.5588</b> | <b>1.9100e-003</b> | <b>1.6000e-003</b> | <b>62.0823</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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        |
| <b>Total</b> | <b>0.6863</b> | <b>7.0258</b> | <b>7.1527</b> | <b>0.0114</b> |               | <b>0.3719</b> | <b>0.3719</b> |                | <b>0.3422</b> | <b>0.3422</b> |          | <b>1,103.9393</b> | <b>1,103.9393</b> | <b>0.3570</b> |     | <b>1,112.8652</b> |

**Unmitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day             |               |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Vendor       | 2.0400e-003        | 0.0512        | 0.0173        | 2.1000e-004        | 6.7800e-003   | 4.9000e-004        | 7.2700e-003   | 1.9500e-003        | 4.7000e-004        | 2.4200e-003        |          | 22.1692        | 22.1692        | 7.4000e-004        | 3.1900e-003        | 23.1393        |
| Worker       | 5.8000e-003        | 3.9600e-003   | 0.0603        | 1.5000e-004        | 0.0164        | 1.1000e-004        | 0.0165        | 4.3600e-003        | 1.0000e-004        | 4.4600e-003        |          | 15.3897        | 15.3897        | 4.8000e-004        | 4.0000e-004        | 15.5206        |
| <b>Total</b> | <b>7.8400e-003</b> | <b>0.0551</b> | <b>0.0776</b> | <b>3.6000e-004</b> | <b>0.0232</b> | <b>6.0000e-004</b> | <b>0.0238</b> | <b>6.3100e-003</b> | <b>5.7000e-004</b> | <b>6.8800e-003</b> |          | <b>37.5589</b> | <b>37.5589</b> | <b>1.2200e-003</b> | <b>3.5900e-003</b> | <b>38.6599</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.3931        | 3.6273        | 7.5179        | 0.0114        |               | 0.1887        | 0.1887        |                | 0.1743        | 0.1743        | 0.0000        | 1,103.9393        | 1,103.9393        | 0.3570        |     | 1,112.8652        |
| <b>Total</b> | <b>0.3931</b> | <b>3.6273</b> | <b>7.5179</b> | <b>0.0114</b> |               | <b>0.1887</b> | <b>0.1887</b> |                | <b>0.1743</b> | <b>0.1743</b> | <b>0.0000</b> | <b>1,103.9393</b> | <b>1,103.9393</b> | <b>0.3570</b> |     | <b>1,112.8652</b> |

**Mitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day             |               |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Vendor       | 2.0400e-003        | 0.0512        | 0.0173        | 2.1000e-004        | 6.7800e-003   | 4.9000e-004        | 7.2700e-003   | 1.9500e-003        | 4.7000e-004        | 2.4200e-003        |          | 22.1692        | 22.1692        | 7.4000e-004        | 3.1900e-003        | 23.1393        |
| Worker       | 5.8000e-003        | 3.9600e-003   | 0.0603        | 1.5000e-004        | 0.0164        | 1.1000e-004        | 0.0165        | 4.3600e-003        | 1.0000e-004        | 4.4600e-003        |          | 15.3897        | 15.3897        | 4.8000e-004        | 4.0000e-004        | 15.5206        |
| <b>Total</b> | <b>7.8400e-003</b> | <b>0.0551</b> | <b>0.0776</b> | <b>3.6000e-004</b> | <b>0.0232</b> | <b>6.0000e-004</b> | <b>0.0238</b> | <b>6.3100e-003</b> | <b>5.7000e-004</b> | <b>6.8800e-003</b> |          | <b>37.5589</b> | <b>37.5589</b> | <b>1.2200e-003</b> | <b>3.5900e-003</b> | <b>38.6599</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

**3.5 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            |
| <b>Total</b> | <b>0.6469</b> | <b>5.9174</b> | <b>7.0348</b> | <b>0.0113</b> |               | <b>0.2961</b> | <b>0.2961</b> |                | <b>0.2758</b> | <b>0.2758</b> |          | <b>1,035.8246</b> | <b>1,035.8246</b> | <b>0.3017</b> |     | <b>1,043.3677</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0522        | 0.0357        | 0.5428        | 1.3600e-003        | 0.1479        | 9.7000e-004        | 0.1488        | 0.0392         | 8.9000e-004        | 0.0401        |          | 138.5073        | 138.5073        | 4.2900e-003        | 3.5900e-003        | 139.6851        |
| <b>Total</b> | <b>0.0522</b> | <b>0.0357</b> | <b>0.5428</b> | <b>1.3600e-003</b> | <b>0.1479</b> | <b>9.7000e-004</b> | <b>0.1488</b> | <b>0.0392</b>  | <b>8.9000e-004</b> | <b>0.0401</b> |          | <b>138.5073</b> | <b>138.5073</b> | <b>4.2900e-003</b> | <b>3.5900e-003</b> | <b>139.6851</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.4707        | 4.8129        | 6.1094        | 9.1300e-003        |               | 0.2531        | 0.2531        |                | 0.2329        | 0.2329        | 0.0000        | 884.2756        | 884.2756        | 0.2860        |     | 891.4254        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| <b>Total</b> | <b>0.4707</b> | <b>4.8129</b> | <b>6.1094</b> | <b>9.1300e-003</b> |               | <b>0.2531</b> | <b>0.2531</b> |                | <b>0.2329</b> | <b>0.2329</b> | <b>0.0000</b> | <b>884.2756</b> | <b>884.2756</b> | <b>0.2860</b> |     | <b>891.4254</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0522        | 0.0357        | 0.5428        | 1.3600e-003        | 0.1479        | 9.7000e-004        | 0.1488        | 0.0392         | 8.9000e-004        | 0.0401        |          | 138.5073        | 138.5073        | 4.2900e-003        | 3.5900e-003        | 139.6851        |
| <b>Total</b> | <b>0.0522</b> | <b>0.0357</b> | <b>0.5428</b> | <b>1.3600e-003</b> | <b>0.1479</b> | <b>9.7000e-004</b> | <b>0.1488</b> | <b>0.0392</b>  | <b>8.9000e-004</b> | <b>0.0401</b> |          | <b>138.5073</b> | <b>138.5073</b> | <b>4.2900e-003</b> | <b>3.5900e-003</b> | <b>139.6851</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 10.1507        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>10.3552</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 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       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 10.1507        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>10.1804</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 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       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

|                            |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Government Office Building | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Government Office Building | 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        |
| <b>Total</b>               |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                            | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                   | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Government Office Building | 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        |
| <b>Total</b>               |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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   | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |     | 1.7000e-003 |
| Unmitigated | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |     | 1.7000e-003 |

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG                | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|-----------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory           | lb/day             |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |               |     |                    |
| Architectural Coating | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |     | 1.7000e-003        |
| <b>Total</b>          | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> |     | <b>1.7000e-003</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

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

**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 | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |     | 1.7000e-003        |
| <b>Total</b>          | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> |     | <b>1.7000e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Summer

**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**

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Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Government Office - Construction**

Los Angeles-Mojave Desert County, Winter

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                  | Size | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------|------|----------|-------------|--------------------|------------|
| Government Office Building | 7.30 | 1000sqft | 0.17        | 7,300.00           | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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 - Water 2x daily based on AVAQM regulations for dust control; not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 4.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate               | 6/22/2022     | 6/8/2022     |
| tblConstructionPhase    | PhaseEndDate               | 6/8/2022      | 6/7/2022     |
| tblConstructionPhase    | PhaseEndDate               | 1/19/2022     | 1/18/2022    |
| tblConstructionPhase    | PhaseEndDate               | 6/15/2022     | 1/25/2022    |
| tblConstructionPhase    | PhaseStartDate             | 6/16/2022     | 6/2/2022     |
| tblConstructionPhase    | PhaseStartDate             | 1/20/2022     | 1/19/2022    |
| tblConstructionPhase    | PhaseStartDate             | 1/18/2022     | 1/15/2022    |



Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

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

|                       |                              |              |           |
|-----------------------|------------------------------|--------------|-----------|
| tblConstructionPhase  | PhaseStartDate               | 6/9/2022     | 1/19/2022 |
| tblConsumerProducts   | ROG_EF                       | 2.14E-05     | 0         |
| tblConsumerProducts   | ROG_EF_Degreaser             | 3.542E-07    | 0         |
| tblConsumerProducts   | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0         |
| tblEnergyUse          | LightingElect                | 3.77         | 0.00      |
| tblEnergyUse          | NT24E                        | 4.62         | 0.00      |
| tblEnergyUse          | NT24NG                       | 0.39         | 0.00      |
| tblEnergyUse          | T24E                         | 4.11         | 0.00      |
| tblEnergyUse          | T24NG                        | 9.92         | 0.00      |
| tblLandscapeEquipment | NumberSummerDays             | 180          | 0         |
| tblSolidWaste         | SolidWasteGenerationRate     | 6.79         | 0.00      |
| tblVehicleTrips       | WD_TR                        | 22.59        | 0.00      |
| tblWater              | IndoorWaterUseRate           | 1,450,215.71 | 0.00      |
| tblWater              | OutdoorWaterUseRate          | 888,841.88   | 0.00      |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG            | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 11.0496        | 13.0402        | 14.7657        | 0.0243        | 5.3777        | 0.6696        | 5.8954        | 2.5860         | 0.6195        | 3.0623        | 0.0000        | 2,307.7467        | 2,307.7467        | 0.6644        | 0.0378        | 2,326.5804        |
| <b>Maximum</b> | <b>11.0496</b> | <b>13.0402</b> | <b>14.7657</b> | <b>0.0243</b> | <b>5.3777</b> | <b>0.6696</b> | <b>5.8954</b> | <b>2.5860</b>  | <b>0.6195</b> | <b>3.0623</b> | <b>0.0000</b> | <b>2,307.7467</b> | <b>2,307.7467</b> | <b>0.6644</b> | <b>0.0378</b> | <b>2,326.5804</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

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

**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    | 10.5816 | 8.5372 | 14.2056 | 0.0222 | 2.4561        | 0.4435       | 2.8565     | 1.1733         | 0.4087        | 1.5423      | 0.0000   | 2,156.1978 | 2,156.1978 | 0.6487 | 0.0378 | 2,174.6381 |
| Maximum | 10.5816 | 8.5372 | 14.2056 | 0.0222 | 2.4561        | 0.4435       | 2.8565     | 1.1733         | 0.4087        | 1.5423      | 0.0000   | 2,156.1978 | 2,156.1978 | 0.6487 | 0.0378 | 2,174.6381 |

|                   | ROG  | NOx   | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 4.24 | 34.53 | 3.79 | 8.80 | 54.33         | 33.77        | 51.55      | 54.63          | 34.03         | 49.63       | 0.00     | 6.57     | 6.57      | 2.37 | 0.00 | 6.53 |

**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     | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |        | 1.7000e-003 |
| Energy   | 0.0000      | 0.0000      | 0.0000      | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000      |
| Mobile   | 0.0000      | 0.0000      | 0.0000      | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000      | 0.0000      | 0.0000 | 0.0000 | 0.0000      |

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

|       |             |             |             |        |        |        |        |        |        |        |        |             |             |        |        |             |
|-------|-------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|--------|-------------|
| Total | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.6000e-003 | 1.6000e-003 | 0.0000 | 0.0000 | 1.7000e-003 |
|-------|-------------|-------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|-------------|-------------|--------|--------|-------------|

**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         | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |               | 1.7000e-003        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| <b>Total</b> | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.7000e-003</b> |

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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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/14/2022 | 5             | 10       |                   |
| 2            | Grading               | Grading               | 1/15/2022  | 1/18/2022 | 5             | 2        |                   |
| 3            | Building Construction | Building Construction | 1/19/2022  | 6/7/2022  | 5             | 100      |                   |
| 4            | Paving                | Paving                | 1/19/2022  | 1/25/2022 | 5             | 5        |                   |
| 5            | Architectural Coating | Architectural Coating | 6/2/2022   | 6/8/2022  | 5             | 5        |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 1.5****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 10,950; Non-Residential Outdoor: 3,650; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 4      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 4.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 2      | 6.00        | 89          | 0.20        |
| Grading               | Graders                  | 1      | 6.00        | 187         | 0.41        |



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

| Category     | lb/day        |               |               |               |               |               |               |               |               |               | lb/day |                   |                   |               |  |                   |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|-------------------|-------------------|---------------|--|-------------------|
|              | Fugitive Dust |               |               |               |               | 0.7087        | 0.0000        | 0.7087        | 0.1073        | 0.0000        | 0.1073 |                   |                   | 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        |
| <b>Total</b> | <b>0.7094</b> | <b>6.4138</b> | <b>7.4693</b> | <b>0.0120</b> | <b>0.7087</b> | <b>0.3375</b> | <b>1.0463</b> | <b>0.1073</b> | <b>0.3225</b> | <b>0.4299</b> |        | <b>1,147.9025</b> | <b>1,147.9025</b> | <b>0.2119</b> |  | <b>1,153.2001</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0150        | 0.5767        | 0.1315        | 2.0500e-003        | 0.0578        | 4.1300e-003        | 0.0619        | 0.0158         | 3.9500e-003        | 0.0198        |          | 224.7218        | 224.7218        | 0.0119        | 0.0357        | 235.6452        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029         | 72.9029         | 2.4500e-003   | 2.1300e-003   | 73.5996         |
| <b>Total</b> | <b>0.0456</b> | <b>0.5986</b> | <b>0.4117</b> | <b>2.7700e-003</b> | <b>0.1399</b> | <b>4.6700e-003</b> | <b>0.1446</b> | <b>0.0376</b>  | <b>4.4500e-003</b> | <b>0.0421</b> |          | <b>297.6247</b> | <b>297.6247</b> | <b>0.0144</b> | <b>0.0378</b> | <b>309.2447</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |               |               | 0.3189        | 0.0000        | 0.3189        | 0.0483         | 0.0000        | 0.0483        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4143        | 3.8838        | 7.6633        | 0.0120        |               | 0.1957        | 0.1957        |                | 0.1807        | 0.1807        | 0.0000        | 1,147.9025        | 1,147.9025        | 0.2119        |     | 1,153.2001        |
| <b>Total</b>  | <b>0.4143</b> | <b>3.8838</b> | <b>7.6633</b> | <b>0.0120</b> | <b>0.3189</b> | <b>0.1957</b> | <b>0.5146</b> | <b>0.0483</b>  | <b>0.1807</b> | <b>0.2290</b> | <b>0.0000</b> | <b>1,147.9025</b> | <b>1,147.9025</b> | <b>0.2119</b> |     | <b>1,153.2001</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0150        | 0.5767        | 0.1315        | 2.0500e-003        | 0.0578        | 4.1300e-003        | 0.0619        | 0.0158         | 3.9500e-003        | 0.0198        |          | 224.7218        | 224.7218        | 0.0119        | 0.0357        | 235.6452        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029         | 72.9029         | 2.4500e-003   | 2.1300e-003   | 73.5996         |
| <b>Total</b> | <b>0.0456</b> | <b>0.5986</b> | <b>0.4117</b> | <b>2.7700e-003</b> | <b>0.1399</b> | <b>4.6700e-003</b> | <b>0.1446</b> | <b>0.0376</b>  | <b>4.4500e-003</b> | <b>0.0421</b> |          | <b>297.6247</b> | <b>297.6247</b> | <b>0.0144</b> | <b>0.0378</b> | <b>309.2447</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 5.3119        | 0.0000        | 5.3119        | 2.5686         | 0.0000        | 2.5686        |          |                   | 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        |
| <b>Total</b>  | <b>1.0832</b> | <b>12.0046</b> | <b>5.9360</b> | <b>0.0141</b> | <b>5.3119</b> | <b>0.5173</b> | <b>5.8292</b> | <b>2.5686</b>  | <b>0.4759</b> | <b>3.0445</b> |          | <b>1,364.8198</b> | <b>1,364.8198</b> | <b>0.4414</b> |     | <b>1,375.8551</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0245        | 0.0175        | 0.2242        | 5.7000e-004        | 0.0657        | 4.3000e-004        | 0.0662        | 0.0174         | 4.0000e-004        | 0.0178        |          | 58.3223        | 58.3223        | 1.9600e-003        | 1.7100e-003        | 58.8796        |
| <b>Total</b> | <b>0.0245</b> | <b>0.0175</b> | <b>0.2242</b> | <b>5.7000e-004</b> | <b>0.0657</b> | <b>4.3000e-004</b> | <b>0.0662</b> | <b>0.0174</b>  | <b>4.0000e-004</b> | <b>0.0178</b> |          | <b>58.3223</b> | <b>58.3223</b> | <b>1.9600e-003</b> | <b>1.7100e-003</b> | <b>58.8796</b> |



## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |               |               | 2.3904        | 0.0000        | 2.3904        | 1.1559         | 0.0000        | 1.1559        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.8328        | 8.3251        | 6.8759        | 0.0141        |               | 0.4000        | 0.4000        |                | 0.3686        | 0.3686        | 0.0000        | 1,364.8198        | 1,364.8198        | 0.4414        |     | 1,375.8551        |
| <b>Total</b>  | <b>0.8328</b> | <b>8.3251</b> | <b>6.8759</b> | <b>0.0141</b> | <b>2.3904</b> | <b>0.4000</b> | <b>2.7904</b> | <b>1.1559</b>  | <b>0.3686</b> | <b>1.5245</b> | <b>0.0000</b> | <b>1,364.8198</b> | <b>1,364.8198</b> | <b>0.4414</b> |     | <b>1,375.8551</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0245        | 0.0175        | 0.2242        | 5.7000e-004        | 0.0657        | 4.3000e-004        | 0.0662        | 0.0174         | 4.0000e-004        | 0.0178        |          | 58.3223        | 58.3223        | 1.9600e-003        | 1.7100e-003        | 58.8796        |
| <b>Total</b> | <b>0.0245</b> | <b>0.0175</b> | <b>0.2242</b> | <b>5.7000e-004</b> | <b>0.0657</b> | <b>4.3000e-004</b> | <b>0.0662</b> | <b>0.0174</b>  | <b>4.0000e-004</b> | <b>0.0178</b> |          | <b>58.3223</b> | <b>58.3223</b> | <b>1.9600e-003</b> | <b>1.7100e-003</b> | <b>58.8796</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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        |
| <b>Total</b> | <b>0.6863</b> | <b>7.0258</b> | <b>7.1527</b> | <b>0.0114</b> |               | <b>0.3719</b> | <b>0.3719</b> |                | <b>0.3422</b> | <b>0.3422</b> |          | <b>1,103.9393</b> | <b>1,103.9393</b> | <b>0.3570</b> |     | <b>1,112.8652</b> |

**Unmitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day             |               |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Vendor       | 2.0200e-003        | 0.0533        | 0.0178        | 2.1000e-004        | 6.7800e-003   | 4.9000e-004        | 7.2700e-003   | 1.9500e-003        | 4.7000e-004        | 2.4200e-003        |          | 22.1771        | 22.1771        | 7.4000e-004        | 3.2000e-003        | 23.1484        |
| Worker       | 6.1200e-003        | 4.3800e-003   | 0.0560        | 1.4000e-004        | 0.0164        | 1.1000e-004        | 0.0165        | 4.3600e-003        | 1.0000e-004        | 4.4600e-003        |          | 14.5806        | 14.5806        | 4.9000e-004        | 4.3000e-004        | 14.7199        |
| <b>Total</b> | <b>8.1400e-003</b> | <b>0.0576</b> | <b>0.0739</b> | <b>3.5000e-004</b> | <b>0.0232</b> | <b>6.0000e-004</b> | <b>0.0238</b> | <b>6.3100e-003</b> | <b>5.7000e-004</b> | <b>6.8800e-003</b> |          | <b>36.7577</b> | <b>36.7577</b> | <b>1.2300e-003</b> | <b>3.6300e-003</b> | <b>37.8683</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.3931        | 3.6273        | 7.5179        | 0.0114        |               | 0.1887        | 0.1887        |                | 0.1743        | 0.1743        | 0.0000        | 1,103.9393        | 1,103.9393        | 0.3570        |     | 1,112.8652        |
| <b>Total</b> | <b>0.3931</b> | <b>3.6273</b> | <b>7.5179</b> | <b>0.0114</b> |               | <b>0.1887</b> | <b>0.1887</b> |                | <b>0.1743</b> | <b>0.1743</b> | <b>0.0000</b> | <b>1,103.9393</b> | <b>1,103.9393</b> | <b>0.3570</b> |     | <b>1,112.8652</b> |

**Mitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day             |               |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Vendor       | 2.0200e-003        | 0.0533        | 0.0178        | 2.1000e-004        | 6.7800e-003   | 4.9000e-004        | 7.2700e-003   | 1.9500e-003        | 4.7000e-004        | 2.4200e-003        |          | 22.1771        | 22.1771        | 7.4000e-004        | 3.2000e-003        | 23.1484        |
| Worker       | 6.1200e-003        | 4.3800e-003   | 0.0560        | 1.4000e-004        | 0.0164        | 1.1000e-004        | 0.0165        | 4.3600e-003        | 1.0000e-004        | 4.4600e-003        |          | 14.5806        | 14.5806        | 4.9000e-004        | 4.3000e-004        | 14.7199        |
| <b>Total</b> | <b>8.1400e-003</b> | <b>0.0576</b> | <b>0.0739</b> | <b>3.5000e-004</b> | <b>0.0232</b> | <b>6.0000e-004</b> | <b>0.0238</b> | <b>6.3100e-003</b> | <b>5.7000e-004</b> | <b>6.8800e-003</b> |          | <b>36.7577</b> | <b>36.7577</b> | <b>1.2300e-003</b> | <b>3.6300e-003</b> | <b>37.8683</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

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

**3.5 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            |
| <b>Total</b> | <b>0.6469</b> | <b>5.9174</b> | <b>7.0348</b> | <b>0.0113</b> |               | <b>0.2961</b> | <b>0.2961</b> |                | <b>0.2758</b> | <b>0.2758</b> |          | <b>1,035.8246</b> | <b>1,035.8246</b> | <b>0.3017</b> |     | <b>1,043.3677</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0551        | 0.0394        | 0.5044        | 1.2900e-003        | 0.1479        | 9.7000e-004        | 0.1488        | 0.0392         | 8.9000e-004        | 0.0401        |          | 131.2251        | 131.2251        | 4.4100e-003        | 3.8400e-003        | 132.4792        |
| <b>Total</b> | <b>0.0551</b> | <b>0.0394</b> | <b>0.5044</b> | <b>1.2900e-003</b> | <b>0.1479</b> | <b>9.7000e-004</b> | <b>0.1488</b> | <b>0.0392</b>  | <b>8.9000e-004</b> | <b>0.0401</b> |          | <b>131.2251</b> | <b>131.2251</b> | <b>4.4100e-003</b> | <b>3.8400e-003</b> | <b>132.4792</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.4707        | 4.8129        | 6.1094        | 9.1300e-003        |               | 0.2531        | 0.2531        |                | 0.2329        | 0.2329        | 0.0000        | 884.2756        | 884.2756        | 0.2860        |     | 891.4254        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| <b>Total</b> | <b>0.4707</b> | <b>4.8129</b> | <b>6.1094</b> | <b>9.1300e-003</b> |               | <b>0.2531</b> | <b>0.2531</b> |                | <b>0.2329</b> | <b>0.2329</b> | <b>0.0000</b> | <b>884.2756</b> | <b>884.2756</b> | <b>0.2860</b> |     | <b>891.4254</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0551        | 0.0394        | 0.5044        | 1.2900e-003        | 0.1479        | 9.7000e-004        | 0.1488        | 0.0392         | 8.9000e-004        | 0.0401        |          | 131.2251        | 131.2251        | 4.4100e-003        | 3.8400e-003        | 132.4792        |
| <b>Total</b> | <b>0.0551</b> | <b>0.0394</b> | <b>0.5044</b> | <b>1.2900e-003</b> | <b>0.1479</b> | <b>9.7000e-004</b> | <b>0.1488</b> | <b>0.0392</b>  | <b>8.9000e-004</b> | <b>0.0401</b> |          | <b>131.2251</b> | <b>131.2251</b> | <b>4.4100e-003</b> | <b>3.8400e-003</b> | <b>132.4792</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 10.1507        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>10.3552</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 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       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 10.1507        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>10.1804</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 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       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use                   | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------------|-------------------------|----------|--------|-------------|------------|
|                            | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Government Office Building | 0.00                    | 0.00     | 0.00   |             |            |
| Total                      | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Government Office Building | 9.50       | 7.30       | 7.30        | 33.00      | 62.00      | 5.00        | 50             | 34       | 16      |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|



Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

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

|                            |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Government Office Building | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Government Office Building | 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        |
| <b>Total</b>               |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                            | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                   | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Government Office Building | 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        |
| <b>Total</b>               |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert 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   | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |     | 1.7000e-003 |
| Unmitigated | 7.0000e-005 | 1.0000e-005 | 7.5000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.6000e-003 | 1.6000e-003 | 0.0000 |     | 1.7000e-003 |

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG                | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|-----------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory           | lb/day             |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |               |     |                    |
| Architectural Coating | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |     | 1.7000e-003        |
| <b>Total</b>          | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> |     | <b>1.7000e-003</b> |

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

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

**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 | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 7.0000e-005        | 1.0000e-005        | 7.5000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.6000e-003        | 1.6000e-003        | 0.0000        |     | 1.7000e-003        |
| <b>Total</b>          | <b>7.0000e-005</b> | <b>1.0000e-005</b> | <b>7.5000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> |     | <b>1.7000e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Palmdale GPU - Government Office - Construction - Los Angeles-Mojave Desert County, Winter

**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**

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## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Hotel Construction Only****Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|-----------|-------|--------|-------------|--------------------|------------|
| Hotel     | 58.00 | Room   | 1.93        | 84,216.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



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|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.14         | 0.00         |
| tblEnergyUse            | NT24E                        | 2.89         | 0.00         |
| tblEnergyUse            | NT24NG                       | 4.06         | 0.00         |
| tblEnergyUse            | T24E                         | 2.28         | 0.00         |
| tblEnergyUse            | T24NG                        | 19.72        | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 31.75        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 8.19         | 0.00         |
| tblVehicleTrips         | SU_TR                        | 5.95         | 0.00         |
| tblVehicleTrips         | WD_TR                        | 8.36         | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,471,272.66 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 163,474.74   | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

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



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|                |               |               |               |                    |               |               |               |               |               |               |               |                 |                 |               |                    |                 |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| 2022           | 0.3647        | 1.6081        | 1.6232        | 3.2500e-003        | 0.0974        | 0.0720        | 0.1694        | 0.0246        | 0.0692        | 0.0937        | 0.0000        | 278.3176        | 278.3176        | 0.0425        | 6.6300e-003        | 281.3551        |
| <b>Maximum</b> | <b>0.3647</b> | <b>1.6081</b> | <b>1.6232</b> | <b>3.2500e-003</b> | <b>0.0974</b> | <b>0.0720</b> | <b>0.1694</b> | <b>0.0246</b> | <b>0.0692</b> | <b>0.0937</b> | <b>0.0000</b> | <b>278.3176</b> | <b>278.3176</b> | <b>0.0425</b> | <b>6.6300e-003</b> | <b>281.3551</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.1892        | 0.1766        | 0.8245        | 1.8200e-003        | 0.0673        | 2.9700e-003        | 0.0703        | 0.0174         | 2.9200e-003        | 0.0204        | 0.0000        | 165.1587        | 165.1587        | 0.0330        | 6.6300e-003        | 167.9597        |
| <b>Maximum</b> | <b>0.1892</b> | <b>0.1766</b> | <b>0.8245</b> | <b>1.8200e-003</b> | <b>0.0673</b> | <b>2.9700e-003</b> | <b>0.0703</b> | <b>0.0174</b>  | <b>2.9200e-003</b> | <b>0.0204</b> | <b>0.0000</b> | <b>165.1587</b> | <b>165.1587</b> | <b>0.0330</b> | <b>6.6300e-003</b> | <b>167.9597</b> |

|                          | ROG          | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4          | N2O         | CO2e         |
|--------------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>48.11</b> | <b>89.02</b> | <b>49.20</b> | <b>44.00</b> | <b>30.86</b>  | <b>95.88</b> | <b>58.49</b> | <b>29.05</b>   | <b>95.78</b>  | <b>78.28</b> | <b>0.00</b> | <b>40.66</b> | <b>40.66</b> | <b>22.26</b> | <b>0.00</b> | <b>40.30</b> |

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



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 2/2/2022   | 2/7/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 11/14/2022 | 5             | 200      |                   |

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|   |                       |                       |            |            |   |    |
|---|-----------------------|-----------------------|------------|------------|---|----|
| 4 | Paving                | Paving                | 11/15/2022 | 11/28/2022 | 5 | 10 |
| 5 | Architectural Coating | Architectural Coating | 11/29/2022 | 12/12/2022 | 5 | 10 |

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

**Acres of Grading (Grading Phase): 4**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,324; Non-Residential Outdoor: 42,108; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 1      | 6.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 1      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Building Construction | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Demolition            | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 7.00        | 97          | 0.37        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 3      | 8.00        | 46          | 0.45        |

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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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 7.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 35.00              | 14.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 374.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 0.0405        | 0.0000             | 0.0405        | 6.1300e-003        | 0.0000             | 6.1300e-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        | 21.2120        |
| <b>Total</b>  | <b>0.0169</b> | <b>0.1662</b> | <b>0.1396</b> | <b>2.4000e-004</b> | <b>0.0405</b> | <b>8.3800e-003</b> | <b>0.0488</b> | <b>6.1300e-003</b> | <b>7.8300e-003</b> | <b>0.0140</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2120</b> |

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|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |                |                |                    |                    |                |
| Hauling      | 8.6000e-004        | 0.0331        | 7.3700e-003   | 1.2000e-004        | 3.2200e-003        | 2.3000e-004        | 3.4500e-003        | 8.8000e-004        | 2.2000e-004        | 1.1100e-003        | 0.0000        | 11.5503        | 11.5503        | 6.1000e-004        | 1.8300e-003        | 12.1118        |
| Vendor       | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003   | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726         | 0.8726         | 3.0000e-005        | 3.0000e-005        | 0.8809         |
| <b>Total</b> | <b>1.2300e-003</b> | <b>0.0334</b> | <b>0.0111</b> | <b>1.3000e-004</b> | <b>4.2700e-003</b> | <b>2.4000e-004</b> | <b>4.5000e-003</b> | <b>1.1600e-003</b> | <b>2.3000e-004</b> | <b>1.3900e-003</b> | <b>0.0000</b> | <b>12.4229</b> | <b>12.4229</b> | <b>6.4000e-004</b> | <b>1.8600e-003</b> | <b>12.9927</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0182        | 0.0000             | 0.0182        | 2.7600e-003        | 0.0000             | 2.7600e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 2.8100e-003        | 0.0122        | 0.1472        | 2.4000e-004        |               | 3.7000e-004        | 3.7000e-004   |                    | 3.7000e-004        | 3.7000e-004        | 0.0000        | 21.0777        | 21.0777        | 5.3700e-003        | 0.0000        | 21.2119        |
| <b>Total</b>  | <b>2.8100e-003</b> | <b>0.0122</b> | <b>0.1472</b> | <b>2.4000e-004</b> | <b>0.0182</b> | <b>3.7000e-004</b> | <b>0.0186</b> | <b>2.7600e-003</b> | <b>3.7000e-004</b> | <b>3.1300e-003</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2119</b> |

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|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |                |                |                    |                    |                |
| Hauling      | 8.6000e-004        | 0.0331        | 7.3700e-003   | 1.2000e-004        | 3.2200e-003        | 2.3000e-004        | 3.4500e-003        | 8.8000e-004        | 2.2000e-004        | 1.1100e-003        | 0.0000        | 11.5503        | 11.5503        | 6.1000e-004        | 1.8300e-003        | 12.1118        |
| Vendor       | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003   | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726         | 0.8726         | 3.0000e-005        | 3.0000e-005        | 0.8809         |
| <b>Total</b> | <b>1.2300e-003</b> | <b>0.0334</b> | <b>0.0111</b> | <b>1.3000e-004</b> | <b>4.2700e-003</b> | <b>2.4000e-004</b> | <b>4.5000e-003</b> | <b>1.1600e-003</b> | <b>2.3000e-004</b> | <b>1.3900e-003</b> | <b>0.0000</b> | <b>12.4229</b> | <b>12.4229</b> | <b>6.4000e-004</b> | <b>1.8600e-003</b> | <b>12.9927</b> |

**3.3 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        | 6.8500e-003        | 0.0000             | 6.8500e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 3.0800e-003        | 0.0340        | 0.0184        | 4.0000e-005        |               | 1.4800e-003        | 1.4800e-003   |                    | 1.3700e-003        | 1.3700e-003        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>3.0800e-003</b> | <b>0.0340</b> | <b>0.0184</b> | <b>4.0000e-005</b> | <b>0.0142</b> | <b>1.4800e-003</b> | <b>0.0157</b> | <b>6.8500e-003</b> | <b>1.3700e-003</b> | <b>8.2200e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 6.3700e-003        | 0.0000             | 6.3700e-003        | 3.0800e-003        | 0.0000             | 3.0800e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.0000e-004        | 2.1900e-003        | 0.0218        | 4.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>5.0000e-004</b> | <b>2.1900e-003</b> | <b>0.0218</b> | <b>4.0000e-005</b> | <b>6.3700e-003</b> | <b>7.0000e-005</b> | <b>6.4400e-003</b> | <b>3.0800e-003</b> | <b>7.0000e-005</b> | <b>3.1500e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**3.4 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     | 0.1649        | 1.2503        | 1.2726        | 2.2100e-003        |               | 0.0589        | 0.0589        |                | 0.0569        | 0.0569        | 0.0000        | 181.5769        | 181.5769        | 0.0316        | 0.0000        | 182.3675        |
| <b>Total</b> | <b>0.1649</b> | <b>1.2503</b> | <b>1.2726</b> | <b>2.2100e-003</b> |               | <b>0.0589</b> | <b>0.0589</b> |                | <b>0.0569</b> | <b>0.0569</b> | <b>0.0000</b> | <b>181.5769</b> | <b>181.5769</b> | <b>0.0316</b> | <b>0.0000</b> | <b>182.3675</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.8400e-003   | 0.0752        | 0.0245        | 2.9000e-004        | 9.3300e-003   | 6.9000e-004        | 0.0100        | 2.6900e-003    | 6.6000e-004        | 3.3500e-003   | 0.0000        | 28.1605        | 28.1605        | 9.4000e-004        | 4.0600e-003        | 29.3939        |
| Worker       | 9.9700e-003   | 7.8200e-003   | 0.1003        | 2.5000e-004        | 0.0282        | 1.9000e-004        | 0.0284        | 7.4900e-003    | 1.7000e-004        | 7.6600e-003   | 0.0000        | 23.4922        | 23.4922        | 7.8000e-004        | 6.9000e-004        | 23.7159        |
| <b>Total</b> | <b>0.0128</b> | <b>0.0830</b> | <b>0.1249</b> | <b>5.4000e-004</b> | <b>0.0375</b> | <b>8.8000e-004</b> | <b>0.0384</b> | <b>0.0102</b>  | <b>8.3000e-004</b> | <b>0.0110</b> | <b>0.0000</b> | <b>51.6526</b> | <b>51.6526</b> | <b>1.7200e-003</b> | <b>4.7500e-003</b> | <b>53.1098</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |               |               |                |
| Off-Road     | 9.5800e-003        | 0.0415        | 0.4577        | 7.8000e-004        |               | 1.2800e-003        | 1.2800e-003        |                | 1.2800e-003        | 1.2800e-003        | 0.0000        | 68.5899        | 68.5899        | 0.0222        | 0.0000        | 69.1445        |
| <b>Total</b> | <b>9.5800e-003</b> | <b>0.0415</b> | <b>0.4577</b> | <b>7.8000e-004</b> |               | <b>1.2800e-003</b> | <b>1.2800e-003</b> |                | <b>1.2800e-003</b> | <b>1.2800e-003</b> | <b>0.0000</b> | <b>68.5899</b> | <b>68.5899</b> | <b>0.0222</b> | <b>0.0000</b> | <b>69.1445</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.8400e-003   | 0.0752        | 0.0245        | 2.9000e-004        | 9.3300e-003   | 6.9000e-004        | 0.0100        | 2.6900e-003    | 6.6000e-004        | 3.3500e-003   | 0.0000        | 28.1605        | 28.1605        | 9.4000e-004        | 4.0600e-003        | 29.3939        |
| Worker       | 9.9700e-003   | 7.8200e-003   | 0.1003        | 2.5000e-004        | 0.0282        | 1.9000e-004        | 0.0284        | 7.4900e-003    | 1.7000e-004        | 7.6600e-003   | 0.0000        | 23.4922        | 23.4922        | 7.8000e-004        | 6.9000e-004        | 23.7159        |
| <b>Total</b> | <b>0.0128</b> | <b>0.0830</b> | <b>0.1249</b> | <b>5.4000e-004</b> | <b>0.0375</b> | <b>8.8000e-004</b> | <b>0.0384</b> | <b>0.0102</b>  | <b>8.3000e-004</b> | <b>0.0110</b> | <b>0.0000</b> | <b>51.6526</b> | <b>51.6526</b> | <b>1.7200e-003</b> | <b>4.7500e-003</b> | <b>53.1098</b> |

**3.5 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     | 3.4400e-003        | 0.0339        | 0.0440        | 7.0000e-005        |               | 1.7400e-003        | 1.7400e-003        |                | 1.6000e-003        | 1.6000e-003        | 0.0000        | 5.8848        | 5.8848        | 1.8700e-003        | 0.0000        | 5.9315        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>3.4400e-003</b> | <b>0.0339</b> | <b>0.0440</b> | <b>7.0000e-005</b> |               | <b>1.7400e-003</b> | <b>1.7400e-003</b> |                | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> | <b>5.8848</b> | <b>5.8848</b> | <b>1.8700e-003</b> | <b>0.0000</b> | <b>5.9315</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 8.0000e-004        | 3.4600e-003        | 0.0493        | 7.0000e-005        |               | 1.1000e-004        | 1.1000e-004        |                | 1.1000e-004        | 1.1000e-004        | 0.0000        | 5.7130        | 5.7130        | 1.8500e-003        | 0.0000        | 5.7591        |
| Paving       | 0.0000             |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>8.0000e-004</b> | <b>3.4600e-003</b> | <b>0.0493</b> | <b>7.0000e-005</b> |               | <b>1.1000e-004</b> | <b>1.1000e-004</b> |                | <b>1.1000e-004</b> | <b>1.1000e-004</b> | <b>0.0000</b> | <b>5.7130</b> | <b>5.7130</b> | <b>1.8500e-003</b> | <b>0.0000</b> | <b>5.7591</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**3.6 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 | 0.1610        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.0200e-003   | 7.0400e-003        | 9.0700e-003        | 1.0000e-005        |               | 4.1000e-004        | 4.1000e-004        |                | 4.1000e-004        | 4.1000e-004        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.1620</b> | <b>7.0400e-003</b> | <b>9.0700e-003</b> | <b>1.0000e-005</b> |               | <b>4.1000e-004</b> | <b>4.1000e-004</b> |                | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |

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

**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-004        | 8.0000e-005        | 1.0000e-003        | 0.0000        | 2.8000e-004        | 0.0000        | 2.8000e-004        | 7.0000e-005        | 0.0000        | 8.0000e-005        | 0.0000        | 0.2349        | 0.2349        | 1.0000e-005        | 1.0000e-005        | 0.2372        |
| <b>Total</b> | <b>1.0000e-004</b> | <b>8.0000e-005</b> | <b>1.0000e-003</b> | <b>0.0000</b> | <b>2.8000e-004</b> | <b>0.0000</b> | <b>2.8000e-004</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>0.2349</b> | <b>0.2349</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.2372</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO                 | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |                    |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.1610        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.5000e-004   | 6.4000e-004        | 9.1600e-003        | 1.0000e-005        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.1612</b> | <b>6.4000e-004</b> | <b>9.1600e-003</b> | <b>1.0000e-005</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |



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

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
|          | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Hotel    | 0.00                    | 0.00     | 0.00   |             |            |
| Total    | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Hotel    | 9.50       | 7.30       | 7.30        | 19.40      | 61.60      | 19.00       | 58             | 38       | 4       |

**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 |

**5.0 Energy Detail**

Historical Energy Use: N





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

**Mitigated**

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

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|              | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Hotel        | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
| Category    | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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****7.2 Water by Land Use****Unmitigated**

|              | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | Mgal               | tons/yr | MT/yr         |               |               |               |
| Hotel        | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

**Mitigated**

|              | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | Mgal               | tons/yr | MT/yr         |               |               |               |
| Hotel        | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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           | tons/yr | MT/yr         |               |               |               |
| Hotel        | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | tons           | tons/yr | MT/yr         |               |               |               |
| Hotel        | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Hotel Construction Only****Los Angeles-Mojave Desert County, Summer****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|-----------|-------|--------|-------------|--------------------|------------|
| Hotel     | 58.00 | Room   | 1.93        | 84,216.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.14         | 0.00         |
| tblEnergyUse            | NT24E                        | 2.89         | 0.00         |
| tblEnergyUse            | NT24NG                       | 4.06         | 0.00         |
| tblEnergyUse            | T24E                         | 2.28         | 0.00         |
| tblEnergyUse            | T24NG                        | 19.72        | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 31.75        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 8.19         | 0.00         |
| tblVehicleTrips         | SU_TR                        | 5.95         | 0.00         |
| tblVehicleTrips         | WD_TR                        | 8.36         | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,471,272.66 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 163,474.74   | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|      | ROG    | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------|--------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|------|
| Year | lb/day |     |    |     |               |              |            |                |               |             | lb/day   |           |           |     |     |      |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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         | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |               | 0.0135        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0135</b> |

**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         | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |               | 0.0135        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0135</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 2/2/2022   | 2/7/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 11/14/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 11/15/2022 | 11/28/2022 | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/29/2022 | 12/12/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,324; Non-Residential Outdoor: 42,108; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets           | 1      | 8.00        | 84          | 0.74        |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Demolition            | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 7.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 35.00              | 14.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 374.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 4.0465        | 0.0000        | 4.0465        | 0.6127         | 0.0000        | 0.6127        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>4.0465</b> | <b>0.8379</b> | <b>4.8844</b> | <b>0.6127</b>  | <b>0.7829</b> | <b>1.3956</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0871        | 3.1406        | 0.7323        | 0.0116        | 0.3273        | 0.0233        | 0.3507        | 0.0897         | 0.0223        | 0.1121        |          | 1,273.0504        | 1,273.0504        | 0.0676        | 0.2020        | 1,334.9326        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331          | 100.0331          | 3.1000e-003   | 2.5900e-003   | 100.8837          |
| <b>Total</b> | <b>0.1248</b> | <b>3.1664</b> | <b>1.1243</b> | <b>0.0126</b> | <b>0.4341</b> | <b>0.0240</b> | <b>0.4581</b> | <b>0.1181</b>  | <b>0.0230</b> | <b>0.1410</b> |          | <b>1,373.0834</b> | <b>1,373.0834</b> | <b>0.0707</b> | <b>0.2046</b> | <b>1,435.8163</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.8209        | 0.0000        | 1.8209        | 0.2757         | 0.0000        | 0.2757        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.8209</b> | <b>0.0375</b> | <b>1.8584</b> | <b>0.2757</b>  | <b>0.0375</b> | <b>0.3132</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0871        | 3.1406        | 0.7323        | 0.0116        | 0.3273        | 0.0233        | 0.3507        | 0.0897         | 0.0223        | 0.1121        |          | 1,273.0504        | 1,273.0504        | 0.0676        | 0.2020        | 1,334.9326        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331          | 100.0331          | 3.1000e-003   | 2.5900e-003   | 100.8837          |
| <b>Total</b> | <b>0.1248</b> | <b>3.1664</b> | <b>1.1243</b> | <b>0.0126</b> | <b>0.4341</b> | <b>0.0240</b> | <b>0.4581</b> | <b>0.1181</b>  | <b>0.0230</b> | <b>0.1410</b> |          | <b>1,373.0834</b> | <b>1,373.0834</b> | <b>0.0707</b> | <b>0.2046</b> | <b>1,435.8163</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

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

**3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0286        | 0.7161        | 0.2416        | 2.8900e-003        | 0.0949        | 6.9000e-003        | 0.1018        | 0.0273         | 6.6000e-003        | 0.0339        |          | 310.3693        | 310.3693        | 0.0104        | 0.0447        | 323.9505        |
| Worker       | 0.1015        | 0.0694        | 1.0555        | 2.6500e-003        | 0.2875        | 1.8900e-003        | 0.2894        | 0.0763         | 1.7400e-003        | 0.0780        |          | 269.3198        | 269.3198        | 8.3400e-003   | 6.9900e-003   | 271.6099        |
| <b>Total</b> | <b>0.1301</b> | <b>0.7855</b> | <b>1.2971</b> | <b>5.5400e-003</b> | <b>0.3824</b> | <b>8.7900e-003</b> | <b>0.3912</b> | <b>0.1036</b>  | <b>8.3400e-003</b> | <b>0.1119</b> |          | <b>579.6891</b> | <b>579.6891</b> | <b>0.0187</b> | <b>0.0517</b> | <b>595.5604</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0286        | 0.7161        | 0.2416        | 2.8900e-003        | 0.0949        | 6.9000e-003        | 0.1018        | 0.0273         | 6.6000e-003        | 0.0339        |          | 310.3693        | 310.3693        | 0.0104        | 0.0447        | 323.9505        |
| Worker       | 0.1015        | 0.0694        | 1.0555        | 2.6500e-003        | 0.2875        | 1.8900e-003        | 0.2894        | 0.0763         | 1.7400e-003        | 0.0780        |          | 269.3198        | 269.3198        | 8.3400e-003   | 6.9900e-003   | 271.6099        |
| <b>Total</b> | <b>0.1301</b> | <b>0.7855</b> | <b>1.2971</b> | <b>5.5400e-003</b> | <b>0.3824</b> | <b>8.7900e-003</b> | <b>0.3912</b> | <b>0.1036</b>  | <b>8.3400e-003</b> | <b>0.1119</b> |          | <b>579.6891</b> | <b>579.6891</b> | <b>0.0187</b> | <b>0.0517</b> | <b>595.5604</b> |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

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

**3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 32.2032        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>32.4077</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0203        | 0.0139        | 0.2111        | 5.3000e-004        | 0.0575        | 3.8000e-004        | 0.0579        | 0.0153         | 3.5000e-004        | 0.0156        |          | 53.8640        | 53.8640        | 1.6700e-003        | 1.4000e-003        | 54.3220        |
| <b>Total</b> | <b>0.0203</b> | <b>0.0139</b> | <b>0.2111</b> | <b>5.3000e-004</b> | <b>0.0575</b> | <b>3.8000e-004</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>3.5000e-004</b> | <b>0.0156</b> |          | <b>53.8640</b> | <b>53.8640</b> | <b>1.6700e-003</b> | <b>1.4000e-003</b> | <b>54.3220</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 32.2032        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>32.2329</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0203        | 0.0139        | 0.2111        | 5.3000e-004        | 0.0575        | 3.8000e-004        | 0.0579        | 0.0153         | 3.5000e-004        | 0.0156        |          | 53.8640        | 53.8640        | 1.6700e-003        | 1.4000e-003        | 54.3220        |
| <b>Total</b> | <b>0.0203</b> | <b>0.0139</b> | <b>0.2111</b> | <b>5.3000e-004</b> | <b>0.0575</b> | <b>3.8000e-004</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>3.5000e-004</b> | <b>0.0156</b> |          | <b>53.8640</b> | <b>53.8640</b> | <b>1.6700e-003</b> | <b>1.4000e-003</b> | <b>54.3220</b> |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
|          | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Hotel    | 0.00                    | 0.00     | 0.00   |             |            |
| Total    | 0.00                    | 0.00     | 0.00   |             |            |

4.3 Trip Type Information

| Land Use | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Hotel    | 9.50       | 7.30       | 7.30        | 19.40      | 61.60      | 19.00       | 58             | 38       | 4       |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

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

|       |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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        | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use     | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hotel        | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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   | 5.5000e-004 | 5.0000e-005 | 5.9200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0127    | 0.0127    | 3.0000e-005 |     | 0.0135 |
| Unmitigated | 5.5000e-004 | 5.0000e-005 | 5.9200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0127    | 0.0127    | 3.0000e-005 |     | 0.0135 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |     | 0.0135        |
| <b>Total</b>          | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> |     | <b>0.0135</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |     | 0.0135        |
| <b>Total</b>          | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> |     | <b>0.0135</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Summer

**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**

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## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Hotel Construction Only****Los Angeles-Mojave Desert County, Winter****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|-----------|-------|--------|-------------|--------------------|------------|
| Hotel     | 58.00 | Room   | 1.93        | 84,216.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.14         | 0.00         |
| tblEnergyUse            | NT24E                        | 2.89         | 0.00         |
| tblEnergyUse            | NT24NG                       | 4.06         | 0.00         |
| tblEnergyUse            | T24E                         | 2.28         | 0.00         |
| tblEnergyUse            | T24NG                        | 19.72        | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 31.75        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 8.19         | 0.00         |
| tblVehicleTrips         | SU_TR                        | 5.95         | 0.00         |
| tblVehicleTrips         | WD_TR                        | 8.36         | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,471,272.66 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 163,474.74   | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|      | ROG    | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------|--------|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|------|
| Year | lb/day |     |    |     |               |              |            |                |               |             | lb/day   |           |           |     |     |      |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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         | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |               | 0.0135        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0135</b> |

**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         | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |               | 0.0135        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0135</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 2/2/2022   | 2/7/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/8/2022   | 11/14/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 11/15/2022 | 11/28/2022 | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/29/2022 | 12/12/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 126,324; Non-Residential Outdoor: 42,108; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets           | 1      | 8.00        | 84          | 0.74        |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Demolition            | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 7.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 35.00              | 14.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 374.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 4.0465        | 0.0000        | 4.0465        | 0.6127         | 0.0000        | 0.6127        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>4.0465</b> | <b>0.8379</b> | <b>4.8844</b> | <b>0.6127</b>  | <b>0.7829</b> | <b>1.3956</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0850        | 3.2681        | 0.7452        | 0.0116        | 0.3273        | 0.0234        | 0.3507        | 0.0897         | 0.0224        | 0.1121        |          | 1,273.4236        | 1,273.4236        | 0.0675        | 0.2021        | 1,335.3226        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737           | 94.7737           | 3.1900e-003   | 2.7700e-003   | 95.6794           |
| <b>Total</b> | <b>0.1248</b> | <b>3.2966</b> | <b>1.1095</b> | <b>0.0126</b> | <b>0.4341</b> | <b>0.0241</b> | <b>0.4582</b> | <b>0.1181</b>  | <b>0.0230</b> | <b>0.1411</b> |          | <b>1,368.1973</b> | <b>1,368.1973</b> | <b>0.0707</b> | <b>0.2048</b> | <b>1,431.0020</b> |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.8209        | 0.0000        | 1.8209        | 0.2757         | 0.0000        | 0.2757        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.8209</b> | <b>0.0375</b> | <b>1.8584</b> | <b>0.2757</b>  | <b>0.0375</b> | <b>0.3132</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0850        | 3.2681        | 0.7452        | 0.0116        | 0.3273        | 0.0234        | 0.3507        | 0.0897         | 0.0224        | 0.1121        |          | 1,273.4236        | 1,273.4236        | 0.0675        | 0.2021        | 1,335.3226        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737           | 94.7737           | 3.1900e-003   | 2.7700e-003   | 95.6794           |
| <b>Total</b> | <b>0.1248</b> | <b>3.2966</b> | <b>1.1095</b> | <b>0.0126</b> | <b>0.4341</b> | <b>0.0241</b> | <b>0.4582</b> | <b>0.1181</b>  | <b>0.0230</b> | <b>0.1411</b> |          | <b>1,368.1973</b> | <b>1,368.1973</b> | <b>0.0707</b> | <b>0.2048</b> | <b>1,431.0020</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0283        | 0.7456        | 0.2497        | 2.8900e-003        | 0.0949        | 6.9300e-003        | 0.1018        | 0.0273         | 6.6300e-003        | 0.0339        |          | 310.4799        | 310.4799        | 0.0103        | 0.0448        | 324.0771        |
| Worker       | 0.1072        | 0.0766        | 0.9808        | 2.5100e-003        | 0.2875        | 1.8900e-003        | 0.2894        | 0.0763         | 1.7400e-003        | 0.0780        |          | 255.1600        | 255.1600        | 8.5800e-003   | 7.4600e-003   | 257.5984        |
| <b>Total</b> | <b>0.1355</b> | <b>0.8223</b> | <b>1.2305</b> | <b>5.4000e-003</b> | <b>0.3824</b> | <b>8.8200e-003</b> | <b>0.3912</b> | <b>0.1036</b>  | <b>8.3700e-003</b> | <b>0.1119</b> |          | <b>565.6399</b> | <b>565.6399</b> | <b>0.0189</b> | <b>0.0522</b> | <b>581.6755</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0283        | 0.7456        | 0.2497        | 2.8900e-003        | 0.0949        | 6.9300e-003        | 0.1018        | 0.0273         | 6.6300e-003        | 0.0339        |          | 310.4799        | 310.4799        | 0.0103        | 0.0448        | 324.0771        |
| Worker       | 0.1072        | 0.0766        | 0.9808        | 2.5100e-003        | 0.2875        | 1.8900e-003        | 0.2894        | 0.0763         | 1.7400e-003        | 0.0780        |          | 255.1600        | 255.1600        | 8.5800e-003   | 7.4600e-003   | 257.5984        |
| <b>Total</b> | <b>0.1355</b> | <b>0.8223</b> | <b>1.2305</b> | <b>5.4000e-003</b> | <b>0.3824</b> | <b>8.8200e-003</b> | <b>0.3912</b> | <b>0.1036</b>  | <b>8.3700e-003</b> | <b>0.1119</b> |          | <b>565.6399</b> | <b>565.6399</b> | <b>0.0189</b> | <b>0.0522</b> | <b>581.6755</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 32.2032        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>32.4077</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0214        | 0.0153        | 0.1962        | 5.0000e-004        | 0.0575        | 3.8000e-004        | 0.0579        | 0.0153         | 3.5000e-004        | 0.0156        |          | 51.0320        | 51.0320        | 1.7200e-003        | 1.4900e-003        | 51.5197        |
| <b>Total</b> | <b>0.0214</b> | <b>0.0153</b> | <b>0.1962</b> | <b>5.0000e-004</b> | <b>0.0575</b> | <b>3.8000e-004</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>3.5000e-004</b> | <b>0.0156</b> |          | <b>51.0320</b> | <b>51.0320</b> | <b>1.7200e-003</b> | <b>1.4900e-003</b> | <b>51.5197</b> |



## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 32.2032        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>32.2329</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0214        | 0.0153        | 0.1962        | 5.0000e-004        | 0.0575        | 3.8000e-004        | 0.0579        | 0.0153         | 3.5000e-004        | 0.0156        |          | 51.0320        | 51.0320        | 1.7200e-003        | 1.4900e-003        | 51.5197        |
| <b>Total</b> | <b>0.0214</b> | <b>0.0153</b> | <b>0.1962</b> | <b>5.0000e-004</b> | <b>0.0575</b> | <b>3.8000e-004</b> | <b>0.0579</b> | <b>0.0153</b>  | <b>3.5000e-004</b> | <b>0.0156</b> |          | <b>51.0320</b> | <b>51.0320</b> | <b>1.7200e-003</b> | <b>1.4900e-003</b> | <b>51.5197</b> |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------|-------------------------|----------|--------|-------------|------------|
|          | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Hotel    | 0.00                    | 0.00     | 0.00   |             |            |
| Total    | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|          | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Hotel    | 9.50       | 7.30       | 7.30        | 19.40      | 61.60      | 19.00       | 58             | 38       | 4       |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

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

|       |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert 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        | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use     | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Hotel        | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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**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   | 5.5000e-004 | 5.0000e-005 | 5.9200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0127    | 0.0127    | 3.0000e-005 |     | 0.0135 |
| Unmitigated | 5.5000e-004 | 5.0000e-005 | 5.9200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0127    | 0.0127    | 3.0000e-005 |     | 0.0135 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |     | 0.0135        |
| <b>Total</b>          | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> |     | <b>0.0135</b> |

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

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 5.5000e-004        | 5.0000e-005        | 5.9200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0127        | 0.0127        | 3.0000e-005        |     | 0.0135        |
| <b>Total</b>          | <b>5.5000e-004</b> | <b>5.0000e-005</b> | <b>5.9200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0127</b> | <b>0.0127</b> | <b>3.0000e-005</b> |     | <b>0.0135</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Hotel Construction Only - Los Angeles-Mojave Desert County, Winter

**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**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Palmdale GPU - Industrial Construction Only**

**Los Angeles-Mojave Desert County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                        | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|--------|----------|-------------|--------------------|------------|
| Unrefrigerated Warehouse-No Rail | 502.34 | 1000sqft | 11.53       | 502,343.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use -

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately





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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1.91      | 0.00         |
| tblEnergyUse            | NT24E                        | 1.34      | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.03      | 0.00         |
| tblEnergyUse            | T24E                         | 0.58      | 0.00         |
| tblEnergyUse            | T24NG                        | 0.83      | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180       | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 472.20    | 0.00         |
| tblVehicleTrips         | ST_TR                        | 1.74      | 0.00         |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                 |                    |                |      |
|-----------------|--------------------|----------------|------|
| tblVehicleTrips | SU_TR              | 1.74           | 0.00 |
| tblVehicleTrips | WD_TR              | 1.74           | 0.00 |
| tblWater        | IndoorWaterUseRate | 116,166,125.00 | 0.00 |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

|         | ROG     | NOx    | CO     | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4    | N2O    | CO2e     |
|---------|---------|--------|--------|-------------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|--------|--------|----------|
| Year    | tons/yr |        |        |             |               |              |            |                |               |             | MT/yr    |           |           |        |        |          |
| 2022    | 2.1026  | 3.2344 | 3.3670 | 8.6100e-003 | 0.6258        | 0.1313       | 0.7571     | 0.1529         | 0.1230        | 0.2759      | 0.0000   | 783.8263  | 783.8263  | 0.1104 | 0.0425 | 799.2513 |
| Maximum | 2.1026  | 3.2344 | 3.3670 | 8.6100e-003 | 0.6258        | 0.1313       | 0.7571     | 0.1529         | 0.1230        | 0.2759      | 0.0000   | 783.8263  | 783.8263  | 0.1104 | 0.0425 | 799.2513 |

**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    | 1.8789  | 0.9180 | 2.9611 | 7.5900e-003 | 0.4342        | 0.0125       | 0.4467     | 0.1102         | 0.0121        | 0.1223      | 0.0000   | 699.8188  | 699.8188  | 0.1049 | 0.0425 | 715.1061 |
| Maximum | 1.8789  | 0.9180 | 2.9611 | 7.5900e-003 | 0.4342        | 0.0125       | 0.4467     | 0.1102         | 0.0121        | 0.1223      | 0.0000   | 699.8188  | 699.8188  | 0.1049 | 0.0425 | 715.1061 |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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  |
|-------------------|-------|-------|-------|-------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|-------|
| Percent Reduction | 10.64 | 71.62 | 12.05 | 11.85 | 30.63         | 90.48        | 41.00      | 27.93          | 90.14         | 55.67       | 0.00     | 10.72    | 10.72     | 4.99 | 0.00 | 10.53 |

| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1       | 1-1-2022   | 3-31-2022 | 1.3312                                       | 0.3772                                     |
| 2       | 4-1-2022   | 6-30-2022 | 0.7382                                       | 0.2131                                     |
| 3       | 7-1-2022   | 9-30-2022 | 0.7463                                       | 0.2154                                     |
|         |            | Highest   | 1.3312                                       | 0.3772                                     |

**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 |
|--|-----|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|------|
|--|-----|-----|----|-----|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|------|



## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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         | 0.5821        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.5821</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|   |                       |                       |           |            |   |    |
|---|-----------------------|-----------------------|-----------|------------|---|----|
| 4 | Paving                | Paving                | 2/23/2022 | 3/22/2022  | 5 | 20 |
| 5 | Architectural Coating | Architectural Coating | 12/5/2022 | 12/30/2022 | 5 | 20 |

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

**Acres of Grading (Grading Phase): 66**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 753,515; Non-Residential Outdoor: 251,172; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 42.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 211.00             | 82.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 2,285.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 0.2472        | 0.0000             | 0.2472        | 0.0374         | 0.0000             | 0.0374        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0198        | 0.1929        | 0.1545        | 2.9000e-004        |               | 9.3200e-003        | 9.3200e-003   |                | 8.6600e-003        | 8.6600e-003   | 0.0000        | 25.4927        | 25.4927        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>0.0198</b> | <b>0.1929</b> | <b>0.1545</b> | <b>2.9000e-004</b> | <b>0.2472</b> | <b>9.3200e-003</b> | <b>0.2566</b> | <b>0.0374</b>  | <b>8.6600e-003</b> | <b>0.0461</b> | <b>0.0000</b> | <b>25.4927</b> | <b>25.4927</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Unmitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Hauling      | 5.2700e-003        | 0.2021        | 0.0451        | 7.1000e-004        | 0.0197        | 1.4300e-003        | 0.0211        | 5.4000e-003        | 1.3700e-003        | 6.7600e-003        | 0.0000        | 70.5682        | 70.5682        | 3.7500e-003        | 0.0112        | 73.9986        |
| Vendor       | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Worker       | 3.2000e-004        | 2.5000e-004   | 3.2200e-003   | 1.0000e-005        | 9.1000e-004   | 1.0000e-005        | 9.1000e-004   | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7503         | 0.7503         | 2.0000e-005        | 2.0000e-005   | 0.7574         |
| <b>Total</b> | <b>5.5900e-003</b> | <b>0.2024</b> | <b>0.0483</b> | <b>7.2000e-004</b> | <b>0.0206</b> | <b>1.4400e-003</b> | <b>0.0220</b> | <b>5.6400e-003</b> | <b>1.3800e-003</b> | <b>7.0100e-003</b> | <b>0.0000</b> | <b>71.3185</b> | <b>71.3185</b> | <b>3.7700e-003</b> | <b>0.0112</b> | <b>74.7560</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 0.1113        | 0.0000             | 0.1113        | 0.0169         | 0.0000             | 0.0169        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 3.4700e-003        | 0.0150        | 0.1746        | 2.9000e-004        |               | 4.6000e-004        | 4.6000e-004   |                | 4.6000e-004        | 4.6000e-004   | 0.0000        | 25.4926        | 25.4926        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>3.4700e-003</b> | <b>0.0150</b> | <b>0.1746</b> | <b>2.9000e-004</b> | <b>0.1113</b> | <b>4.6000e-004</b> | <b>0.1117</b> | <b>0.0169</b>  | <b>4.6000e-004</b> | <b>0.0173</b> | <b>0.0000</b> | <b>25.4926</b> | <b>25.4926</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Mitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Hauling      | 5.2700e-003        | 0.2021        | 0.0451        | 7.1000e-004        | 0.0197        | 1.4300e-003        | 0.0211        | 5.4000e-003        | 1.3700e-003        | 6.7600e-003        | 0.0000        | 70.5682        | 70.5682        | 3.7500e-003        | 0.0112        | 73.9986        |
| Vendor       | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Worker       | 3.2000e-004        | 2.5000e-004   | 3.2200e-003   | 1.0000e-005        | 9.1000e-004   | 1.0000e-005        | 9.1000e-004   | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7503         | 0.7503         | 2.0000e-005        | 2.0000e-005   | 0.7574         |
| <b>Total</b> | <b>5.5900e-003</b> | <b>0.2024</b> | <b>0.0483</b> | <b>7.2000e-004</b> | <b>0.0206</b> | <b>1.4400e-003</b> | <b>0.0220</b> | <b>5.6400e-003</b> | <b>1.3800e-003</b> | <b>7.0100e-003</b> | <b>0.0000</b> | <b>71.3185</b> | <b>71.3185</b> | <b>3.7700e-003</b> | <b>0.0112</b> | <b>74.7560</b> |

**3.3 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 |               |               |               |                    | 0.1012        | 0.0000        | 0.1012        | 0.0402         | 0.0000        | 0.0402        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0399        | 0.4273        | 0.3195        | 6.8000e-004        |               | 0.0180        | 0.0180        |                | 0.0166        | 0.0166        | 0.0000        | 59.9881        | 59.9881        | 0.0194        | 0.0000        | 60.4731        |
| <b>Total</b>  | <b>0.0399</b> | <b>0.4273</b> | <b>0.3195</b> | <b>6.8000e-004</b> | <b>0.1012</b> | <b>0.0180</b> | <b>0.1192</b> | <b>0.0402</b>  | <b>0.0166</b> | <b>0.0567</b> | <b>0.0000</b> | <b>59.9881</b> | <b>59.9881</b> | <b>0.0194</b> | <b>0.0000</b> | <b>60.4731</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Unmitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.3000e-004        | 4.9000e-004        | 6.3000e-003        | 2.0000e-005        | 1.7700e-003        | 1.0000e-005        | 1.7800e-003        | 4.7000e-004        | 1.0000e-005        | 4.8000e-004        | 0.0000        | 1.4672        | 1.4672        | 5.0000e-005        | 4.0000e-005        | 1.4812        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>4.9000e-004</b> | <b>6.3000e-003</b> | <b>2.0000e-005</b> | <b>1.7700e-003</b> | <b>1.0000e-005</b> | <b>1.7800e-003</b> | <b>4.7000e-004</b> | <b>1.0000e-005</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>1.4672</b> | <b>1.4672</b> | <b>5.0000e-005</b> | <b>4.0000e-005</b> | <b>1.4812</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0456        | 0.0000             | 0.0456        | 0.0181         | 0.0000             | 0.0181        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 8.3800e-003        | 0.0363        | 0.3630        | 6.8000e-004        |               | 1.1200e-003        | 1.1200e-003   |                | 1.1200e-003        | 1.1200e-003   | 0.0000        | 59.9880        | 59.9880        | 0.0194        | 0.0000        | 60.4730        |
| <b>Total</b>  | <b>8.3800e-003</b> | <b>0.0363</b> | <b>0.3630</b> | <b>6.8000e-004</b> | <b>0.0456</b> | <b>1.1200e-003</b> | <b>0.0467</b> | <b>0.0181</b>  | <b>1.1200e-003</b> | <b>0.0192</b> | <b>0.0000</b> | <b>59.9880</b> | <b>59.9880</b> | <b>0.0194</b> | <b>0.0000</b> | <b>60.4730</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.3000e-004        | 4.9000e-004        | 6.3000e-003        | 2.0000e-005        | 1.7700e-003        | 1.0000e-005        | 1.7800e-003        | 4.7000e-004        | 1.0000e-005        | 4.8000e-004        | 0.0000        | 1.4672        | 1.4672        | 5.0000e-005        | 4.0000e-005        | 1.4812        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>4.9000e-004</b> | <b>6.3000e-003</b> | <b>2.0000e-005</b> | <b>1.7700e-003</b> | <b>1.0000e-005</b> | <b>1.7800e-003</b> | <b>4.7000e-004</b> | <b>1.0000e-005</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>1.4672</b> | <b>1.4672</b> | <b>5.0000e-005</b> | <b>4.0000e-005</b> | <b>1.4812</b> |

**3.4 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     | 0.1903        | 1.7411        | 1.8245        | 3.0000e-003        |               | 0.0902        | 0.0902        |                | 0.0849        | 0.0849        | 0.0000        | 258.3737        | 258.3737        | 0.0619        | 0.0000        | 259.9211        |
| <b>Total</b> | <b>0.1903</b> | <b>1.7411</b> | <b>1.8245</b> | <b>3.0000e-003</b> |               | <b>0.0902</b> | <b>0.0902</b> |                | <b>0.0849</b> | <b>0.0849</b> | <b>0.0000</b> | <b>258.3737</b> | <b>258.3737</b> | <b>0.0619</b> | <b>0.0000</b> | <b>259.9211</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 0.0185        | 0.4911        | 0.1602        | 1.8900e-003        | 0.0610        | 4.5100e-003        | 0.0655        | 0.0176         | 4.3200e-003        | 0.0219        | 0.0000        | 183.9080        | 183.9080        | 6.1400e-003   | 0.0265        | 191.9633        |
| Worker       | 0.0670        | 0.0525        | 0.6736        | 1.7100e-003        | 0.1895        | 1.2700e-003        | 0.1907        | 0.0503         | 1.1700e-003        | 0.0515        | 0.0000        | 156.8962        | 156.8962        | 5.2200e-003   | 4.6100e-003   | 158.4002        |
| <b>Total</b> | <b>0.0855</b> | <b>0.5437</b> | <b>0.8337</b> | <b>3.6000e-003</b> | <b>0.2504</b> | <b>5.7800e-003</b> | <b>0.2562</b> | <b>0.0679</b>  | <b>5.4900e-003</b> | <b>0.0734</b> | <b>0.0000</b> | <b>340.8042</b> | <b>340.8042</b> | <b>0.0114</b> | <b>0.0311</b> | <b>350.3635</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0243        | 0.1054        | 1.3276        | 1.9800e-003        |               | 3.2400e-003        | 3.2400e-003        |                | 3.2400e-003        | 3.2400e-003        | 0.0000        | 174.3662        | 174.3662        | 0.0564        | 0.0000        | 175.7761        |
| <b>Total</b> | <b>0.0243</b> | <b>0.1054</b> | <b>1.3276</b> | <b>1.9800e-003</b> |               | <b>3.2400e-003</b> | <b>3.2400e-003</b> |                | <b>3.2400e-003</b> | <b>3.2400e-003</b> | <b>0.0000</b> | <b>174.3662</b> | <b>174.3662</b> | <b>0.0564</b> | <b>0.0000</b> | <b>175.7761</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 0.0185        | 0.4911        | 0.1602        | 1.8900e-003        | 0.0610        | 4.5100e-003        | 0.0655        | 0.0176         | 4.3200e-003        | 0.0219        | 0.0000        | 183.9080        | 183.9080        | 6.1400e-003   | 0.0265        | 191.9633        |
| Worker       | 0.0670        | 0.0525        | 0.6736        | 1.7100e-003        | 0.1895        | 1.2700e-003        | 0.1907        | 0.0503         | 1.1700e-003        | 0.0515        | 0.0000        | 156.8962        | 156.8962        | 5.2200e-003   | 4.6100e-003   | 158.4002        |
| <b>Total</b> | <b>0.0855</b> | <b>0.5437</b> | <b>0.8337</b> | <b>3.6000e-003</b> | <b>0.2504</b> | <b>5.7800e-003</b> | <b>0.2562</b> | <b>0.0679</b>  | <b>5.4900e-003</b> | <b>0.0734</b> | <b>0.0000</b> | <b>340.8042</b> | <b>340.8042</b> | <b>0.0114</b> | <b>0.0311</b> | <b>350.3635</b> |

**3.5 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     | 0.0110        | 0.1113        | 0.1458        | 2.3000e-004        |               | 5.6800e-003        | 5.6800e-003        |                | 5.2200e-003        | 5.2200e-003        | 0.0000        | 20.0276        | 20.0276        | 6.4800e-003        | 0.0000        | 20.1895        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0110</b> | <b>0.1113</b> | <b>0.1458</b> | <b>2.3000e-004</b> |               | <b>5.6800e-003</b> | <b>5.6800e-003</b> |                | <b>5.2200e-003</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>20.0276</b> | <b>20.0276</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1895</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 4.3000e-004        | 3.3000e-004        | 4.2900e-003        | 1.0000e-005        | 1.2100e-003        | 1.0000e-005        | 1.2200e-003        | 3.2000e-004        | 1.0000e-005        | 3.3000e-004        | 0.0000        | 1.0003        | 1.0003        | 3.0000e-005        | 3.0000e-005        | 1.0099        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.3000e-004</b> | <b>4.2900e-003</b> | <b>1.0000e-005</b> | <b>1.2100e-003</b> | <b>1.0000e-005</b> | <b>1.2200e-003</b> | <b>3.2000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.0003</b> | <b>1.0003</b> | <b>3.0000e-005</b> | <b>3.0000e-005</b> | <b>1.0099</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 2.8000e-003        | 0.0122        | 0.1730        | 2.3000e-004        |               | 3.7000e-004        | 3.7000e-004        |                | 3.7000e-004        | 3.7000e-004        | 0.0000        | 20.0275        | 20.0275        | 6.4800e-003        | 0.0000        | 20.1895        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>2.8000e-003</b> | <b>0.0122</b> | <b>0.1730</b> | <b>2.3000e-004</b> |               | <b>3.7000e-004</b> | <b>3.7000e-004</b> |                | <b>3.7000e-004</b> | <b>3.7000e-004</b> | <b>0.0000</b> | <b>20.0275</b> | <b>20.0275</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1895</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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       | 4.3000e-004        | 3.3000e-004        | 4.2900e-003        | 1.0000e-005        | 1.2100e-003        | 1.0000e-005        | 1.2200e-003        | 3.2000e-004        | 1.0000e-005        | 3.3000e-004        | 0.0000        | 1.0003        | 1.0003        | 3.0000e-005        | 3.0000e-005        | 1.0099        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.3000e-004</b> | <b>4.2900e-003</b> | <b>1.0000e-005</b> | <b>1.2100e-003</b> | <b>1.0000e-005</b> | <b>1.2200e-003</b> | <b>3.2000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.0003</b> | <b>1.0003</b> | <b>3.0000e-005</b> | <b>3.0000e-005</b> | <b>1.0099</b> |

**3.6 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 | 1.7463        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 2.0500e-003   | 0.0141        | 0.0181        | 3.0000e-005        |               | 8.2000e-004        | 8.2000e-004        |                | 8.2000e-004        | 8.2000e-004        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>1.7483</b> | <b>0.0141</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>8.2000e-004</b> | <b>8.2000e-004</b> |                | <b>8.2000e-004</b> | <b>8.2000e-004</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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       | 1.2000e-003        | 9.4000e-004        | 0.0120        | 3.0000e-005        | 3.3800e-003        | 2.0000e-005        | 3.4100e-003        | 9.0000e-004        | 2.0000e-005        | 9.2000e-004        | 0.0000        | 2.8009        | 2.8009        | 9.0000e-005        | 8.0000e-005        | 2.8278        |
| <b>Total</b> | <b>1.2000e-003</b> | <b>9.4000e-004</b> | <b>0.0120</b> | <b>3.0000e-005</b> | <b>3.3800e-003</b> | <b>2.0000e-005</b> | <b>3.4100e-003</b> | <b>9.0000e-004</b> | <b>2.0000e-005</b> | <b>9.2000e-004</b> | <b>0.0000</b> | <b>2.8009</b> | <b>2.8009</b> | <b>9.0000e-005</b> | <b>8.0000e-005</b> | <b>2.8278</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 1.7463        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.0000e-004   | 1.2900e-003        | 0.0183        | 3.0000e-005        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>1.7466</b> | <b>1.2900e-003</b> | <b>0.0183</b> | <b>3.0000e-005</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use                         | Average Daily Trip Rate |             |             | Unmitigated | Mitigated  |
|----------------------------------|-------------------------|-------------|-------------|-------------|------------|
|                                  | Weekday                 | Saturday    | Sunday      | Annual VMT  | Annual VMT |
| Unrefrigerated Warehouse-No Rail | 0.00                    | 0.00        | 0.00        |             |            |
| <b>Total</b>                     | <b>0.00</b>             | <b>0.00</b> | <b>0.00</b> |             |            |

**4.3 Trip Type Information**

| Land Use                         | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|----------------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                                  | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Unrefrigerated Warehouse-No Rail | 9.50       | 7.30       | 7.30        | 59.00      | 0.00       | 41.00       | 92             | 5        | 3       |

**4.4 Fleet Mix**

| Land Use                         | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Unrefrigerated Warehouse-No Rail | 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



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Mitigated**

|                                  | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use                         | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Unrefrigerated Warehouse-No Rail | 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        |
| <b>Total</b>                     |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                                  | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                         | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Unrefrigerated Warehouse-No Rail | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>                     |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 0.5821        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.5821</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
| Category    | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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 Not Applied**

**7.2 Water by Land Use**

**Unmitigated**

|                                  | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                         | Mgal               | tons/yr | MT/yr         |               |               |               |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>                     |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Mitigated**

|                                  | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use                         | Mgal               | tons/yr | MT/yr         |               |               |               |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>                     |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail****8.1 Mitigation Measures Waste****Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

**Unmitigated**

|                                  | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                         | tons           | tons/yr | MT/yr         |               |               |               |
| Unrefrigerated Warehouse-No Rail | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>                     |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                                  | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use                         | tons           | tons/yr | MT/yr         |               |               |               |
| Unrefrigerated Warehouse-No Rail | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>                     |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Palmdale GPU - Industrial Construction Only****Los Angeles-Mojave Desert County, Summer****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                        | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|--------|----------|-------------|--------------------|------------|
| Unrefrigerated Warehouse-No Rail | 502.34 | 1000sqft | 11.53       | 502,343.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use -

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately



## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1.91      | 0.00         |
| tblEnergyUse            | NT24E                        | 1.34      | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.03      | 0.00         |
| tblEnergyUse            | T24E                         | 0.58      | 0.00         |
| tblEnergyUse            | T24NG                        | 0.83      | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180       | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 472.20    | 0.00         |
| tblVehicleTrips         | ST_TR                        | 1.74      | 0.00         |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                 |                    |                |      |
|-----------------|--------------------|----------------|------|
| tblVehicleTrips | SU_TR              | 1.74           | 0.00 |
| tblVehicleTrips | WD_TR              | 1.74           | 0.00 |
| tblWater        | IndoorWaterUseRate | 116,166,125.00 | 0.00 |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

|         | ROG      | NOx     | CO      | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|---------|----------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Year    | lb/day   |         |         |        |               |              |            |                |               |             | lb/day   |             |             |        |        |             |
| 2022    | 177.4391 | 51.3333 | 39.1652 | 0.1346 | 35.7552       | 1.6360       | 37.1887    | 5.7550         | 1.5051        | 7.0929      | 0.0000   | 14,231.9436 | 14,231.9436 | 1.9490 | 1.6484 | 14,763.3388 |
| Maximum | 177.4391 | 51.3333 | 39.1652 | 0.1346 | 35.7552       | 1.6360       | 37.1887    | 5.7550         | 1.5051        | 7.0929      | 0.0000   | 14,231.9436 | 14,231.9436 | 1.9490 | 1.6484 | 14,763.3388 |

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    | 175.7763 | 27.6172 | 37.4240 | 0.1346 | 17.6241       | 0.2525       | 17.8766    | 3.0098         | 0.2442        | 3.2541      | 0.0000   | 14,231.9436 | 14,231.9436 | 1.9490 | 1.6484 | 14,763.3388 |
| Maximum | 175.7763 | 27.6172 | 37.4240 | 0.1346 | 17.6241       | 0.2525       | 17.8766    | 3.0098         | 0.2442        | 3.2541      | 0.0000   | 14,231.9436 | 14,231.9436 | 1.9490 | 1.6484 | 14,763.3388 |



Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.94 | 46.20 | 4.45 | 0.00 | 50.71         | 84.56        | 51.93      | 47.70          | 83.77         | 54.12       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**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     | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |        | 0.1172 |
| Energy   | 0.0000 | 0.0000      | 0.0000 | 0.0000 |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Mobile   | 0.0000 | 0.0000      | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|              |               |                    |               |               |               |                    |                    |               |                    |                    |  |               |               |                    |               |               |
|--------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--|---------------|---------------|--------------------|---------------|---------------|
| <b>Total</b> | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> |  | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.1172</b> |
|--------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--|---------------|---------------|--------------------|---------------|---------------|

**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          |
|-----------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|---------------|---------------|
| <b>Category</b> | lb/day        |                    |               |               |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |               |               |
| Area            | 3.1943        | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |               | 0.1172        |
| Energy          | 0.0000        | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile          | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b>    | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b>  | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.1172</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 3/22/2022  | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/30/2022 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 66****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 753,515; Non-Residential Outdoor: 251,172; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 42.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 211.00             | 82.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 2,285.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 32.9656        | 0.0000        | 32.9656        | 4.9913         | 0.0000        | 4.9913        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |                | 1.2427        | 1.2427         |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>32.9656</b> | <b>1.2427</b> | <b>34.2082</b> | <b>4.9913</b>  | <b>1.1553</b> | <b>6.1465</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hauling      | 0.7097        | 25.5842        | 5.9653        | 0.0947        | 2.6664        | 0.1901        | 2.8565        | 0.7310         | 0.1819        | 0.9129        |          | 10,370.4816        | 10,370.4816        | 0.5508        | 1.6454        | 10,874.5844        |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Worker       | 0.0435        | 0.0297         | 0.4517        | 1.1300e-003   | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.4000e-004   | 0.0334        |          | 114.6809           | 114.6809           | 3.5800e-003   | 2.9900e-003   | 115.6624           |
| <b>Total</b> | <b>0.7532</b> | <b>25.6139</b> | <b>6.4170</b> | <b>0.0958</b> | <b>2.7896</b> | <b>0.1909</b> | <b>2.9805</b> | <b>0.7637</b>  | <b>0.1826</b> | <b>0.9463</b> |          | <b>10,485.1625</b> | <b>10,485.1625</b> | <b>0.5544</b> | <b>1.6484</b> | <b>10,990.2468</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 |               |               |                |               | 14.8345        | 0.0000        | 14.8345        | 2.2461         | 0.0000        | 2.2461        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |                | 0.0616        | 0.0616         |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>14.8345</b> | <b>0.0616</b> | <b>14.8961</b> | <b>2.2461</b>  | <b>0.0616</b> | <b>2.3077</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hauling      | 0.7097        | 25.5842        | 5.9653        | 0.0947        | 2.6664        | 0.1901        | 2.8565        | 0.7310         | 0.1819        | 0.9129        |          | 10,370.4816        | 10,370.4816        | 0.5508        | 1.6454        | 10,874.5844        |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Worker       | 0.0435        | 0.0297         | 0.4517        | 1.1300e-003   | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.4000e-004   | 0.0334        |          | 114.6809           | 114.6809           | 3.5800e-003   | 2.9900e-003   | 115.6624           |
| <b>Total</b> | <b>0.7532</b> | <b>25.6139</b> | <b>6.4170</b> | <b>0.0958</b> | <b>2.7896</b> | <b>0.1909</b> | <b>2.9805</b> | <b>0.7637</b>  | <b>0.1826</b> | <b>0.9463</b> |          | <b>10,485.1625</b> | <b>10,485.1625</b> | <b>0.5544</b> | <b>1.6484</b> | <b>10,990.2468</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0396        | 0.6023        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 152.9079        | 152.9079        | 4.7700e-003        | 3.9900e-003        | 154.2165        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0396</b> | <b>0.6023</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>152.9079</b> | <b>152.9079</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>154.2165</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0396        | 0.6023        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 152.9079        | 152.9079        | 4.7700e-003        | 3.9900e-003        | 154.2165        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0396</b> | <b>0.6023</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>152.9079</b> | <b>152.9079</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>154.2165</b> |



## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.1675        | 4.1945        | 1.4153        | 0.0169        | 0.5556        | 0.0404        | 0.5960        | 0.1600         | 0.0387        | 0.1986        |          | 1,817.8773        | 1,817.8773        | 0.0608        | 0.2618        | 1,897.4241        |
| Worker       | 0.6118        | 0.4181        | 6.3543        | 0.0160        | 1.7333        | 0.0114        | 1.7447        | 0.4598         | 0.0105        | 0.4702        |          | 1,613.1780        | 1,613.1780        | 0.0503        | 0.0421        | 1,626.9844        |
| <b>Total</b> | <b>0.7793</b> | <b>4.6126</b> | <b>7.7696</b> | <b>0.0329</b> | <b>2.2889</b> | <b>0.0518</b> | <b>2.3407</b> | <b>0.6197</b>  | <b>0.0491</b> | <b>0.6688</b> |          | <b>3,431.0553</b> | <b>3,431.0553</b> | <b>0.1111</b> | <b>0.3040</b> | <b>3,524.4085</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.1675        | 4.1945        | 1.4153        | 0.0169        | 0.5556        | 0.0404        | 0.5960        | 0.1600         | 0.0387        | 0.1986        |          | 1,817.8773        | 1,817.8773        | 0.0608        | 0.2618        | 1,897.4241        |
| Worker       | 0.6118        | 0.4181        | 6.3543        | 0.0160        | 1.7333        | 0.0114        | 1.7447        | 0.4598         | 0.0105        | 0.4702        |          | 1,613.1780        | 1,613.1780        | 0.0503        | 0.0421        | 1,626.9844        |
| <b>Total</b> | <b>0.7793</b> | <b>4.6126</b> | <b>7.7696</b> | <b>0.0329</b> | <b>2.2889</b> | <b>0.0518</b> | <b>2.3407</b> | <b>0.6197</b>  | <b>0.0491</b> | <b>0.6688</b> |          | <b>3,431.0553</b> | <b>3,431.0553</b> | <b>0.1111</b> | <b>0.3040</b> | <b>3,524.4085</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4517</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>114.6809</b> | <b>114.6809</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>115.6624</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4517        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 114.6809        | 114.6809        | 3.5800e-003        | 2.9900e-003        | 115.6624        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4517</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>114.6809</b> | <b>114.6809</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>115.6624</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.6 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 | 174.6272        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>174.8318</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 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       | 0.1218        | 0.0832        | 1.2648        | 3.1800e-003        | 0.3450        | 2.2600e-003        | 0.3473        | 0.0915         | 2.0800e-003        | 0.0936        |          | 321.1065        | 321.1065        | 0.0100        | 8.3800e-003        | 323.8547        |
| <b>Total</b> | <b>0.1218</b> | <b>0.0832</b> | <b>1.2648</b> | <b>3.1800e-003</b> | <b>0.3450</b> | <b>2.2600e-003</b> | <b>0.3473</b> | <b>0.0915</b>  | <b>2.0800e-003</b> | <b>0.0936</b> |          | <b>321.1065</b> | <b>321.1065</b> | <b>0.0100</b> | <b>8.3800e-003</b> | <b>323.8547</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 | 174.6272        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297          | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>174.6569</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 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       | 0.1218        | 0.0832        | 1.2648        | 3.1800e-003        | 0.3450        | 2.2600e-003        | 0.3473        | 0.0915         | 2.0800e-003        | 0.0936        |          | 321.1065        | 321.1065        | 0.0100        | 8.3800e-003        | 323.8547        |
| <b>Total</b> | <b>0.1218</b> | <b>0.0832</b> | <b>1.2648</b> | <b>3.1800e-003</b> | <b>0.3450</b> | <b>2.2600e-003</b> | <b>0.3473</b> | <b>0.0915</b>  | <b>2.0800e-003</b> | <b>0.0936</b> |          | <b>321.1065</b> | <b>321.1065</b> | <b>0.0100</b> | <b>8.3800e-003</b> | <b>323.8547</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use                         | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------------------|-------------------------|----------|--------|-------------|------------|
|                                  | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Unrefrigerated Warehouse-No Rail | 0.00                    | 0.00     | 0.00   |             |            |
| Total                            | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Unrefrigerated Warehouse-No | 9.50       | 7.30       | 7.30        | 59.00      | 0.00       | 41.00       | 92             | 5        | 3       |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                                  |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Unrefrigerated Warehouse-No Rail | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |



Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   |               |               |               |               |               |
| Unrefrigerated Warehouse-No Rail | 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        |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                                  | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                         | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Unrefrigerated Warehouse-No Rail | 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        |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |     | 0.1172 |
| Unmitigated | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |     | 0.1172 |

**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 | 3.1895        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.7500e-003   | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |     | 0.1172        |
| <b>Total</b>          | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> |               | <b>1.8000e-004</b> | <b>1.8000e-004</b> |                | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> |     | <b>0.1172</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 3.1895        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.7500e-003   | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |     | 0.1172        |
| <b>Total</b>          | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> |               | <b>1.8000e-004</b> | <b>1.8000e-004</b> |                | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> |     | <b>0.1172</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

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Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****Palmdale GPU - Industrial Construction Only**

Los Angeles-Mojave Desert County, Winter

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                        | Size   | Metric   | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|--------|----------|-------------|--------------------|------------|
| Unrefrigerated Warehouse-No Rail | 502.34 | 1000sqft | 11.53       | 502,343.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use -

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately



## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1.91      | 0.00         |
| tblEnergyUse            | NT24E                        | 1.34      | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.03      | 0.00         |
| tblEnergyUse            | T24E                         | 0.58      | 0.00         |
| tblEnergyUse            | T24NG                        | 0.83      | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180       | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 472.20    | 0.00         |
| tblVehicleTrips         | ST_TR                        | 1.74      | 0.00         |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                 |                    |                |      |
|-----------------|--------------------|----------------|------|
| tblVehicleTrips | SU_TR              | 1.74           | 0.00 |
| tblVehicleTrips | WD_TR              | 1.74           | 0.00 |
| tblWater        | IndoorWaterUseRate | 116,166,125.00 | 0.00 |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

|                | ROG             | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |                |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 177.4782        | 52.3747        | 38.7307        | 0.1346        | 35.7552        | 1.6360        | 37.1891        | 5.7550         | 1.5051        | 7.0932        | 0.0000        | 14,228.9545        | 14,228.9545        | 1.9491        | 1.6492        | 14,760.5502        |
| <b>Maximum</b> | <b>177.4782</b> | <b>52.3747</b> | <b>38.7307</b> | <b>0.1346</b> | <b>35.7552</b> | <b>1.6360</b> | <b>37.1891</b> | <b>5.7550</b>  | <b>1.5051</b> | <b>7.0932</b> | <b>0.0000</b> | <b>14,228.9545</b> | <b>14,228.9545</b> | <b>1.9491</b> | <b>1.6492</b> | <b>14,760.5502</b> |

Mitigated Construction

|                | ROG             | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |                |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 175.8153        | 28.6585        | 36.9895        | 0.1346        | 17.6241        | 0.2529        | 17.8770        | 3.0098         | 0.2446        | 3.2544        | 0.0000        | 14,228.9545        | 14,228.9545        | 1.9491        | 1.6492        | 14,760.5502        |
| <b>Maximum</b> | <b>175.8153</b> | <b>28.6585</b> | <b>36.9895</b> | <b>0.1346</b> | <b>17.6241</b> | <b>0.2529</b> | <b>17.8770</b> | <b>3.0098</b>  | <b>0.2446</b> | <b>3.2544</b> | <b>0.0000</b> | <b>14,228.9545</b> | <b>14,228.9545</b> | <b>1.9491</b> | <b>1.6492</b> | <b>14,760.5502</b> |



Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 |
|-------------------|------|-------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.94 | 45.28 | 4.50 | 0.00 | 50.71         | 84.54        | 51.93      | 47.70          | 83.75         | 54.12       | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**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     | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |        | 0.1172 |
| Energy   | 0.0000 | 0.0000      | 0.0000 | 0.0000 |               | 0.0000       | 0.0000      |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |
| Mobile   | 0.0000 | 0.0000      | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000      | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000      | 0.0000 | 0.0000 |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|              |               |                    |               |               |               |                    |                    |               |                    |                    |  |               |               |                    |               |               |
|--------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--|---------------|---------------|--------------------|---------------|---------------|
| <b>Total</b> | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> |  | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.1172</b> |
|--------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--|---------------|---------------|--------------------|---------------|---------------|

**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          |
|-----------------|---------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|---------------|---------------|--------------------|---------------|---------------|
| <b>Category</b> | lb/day        |                    |               |               |               |                    |                    |                |                    |                    | lb/day   |               |               |                    |               |               |
| Area            | 3.1943        | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |               | 0.1172        |
| Energy          | 0.0000        | 0.0000             | 0.0000        | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile          | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b>    | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.8000e-004</b> | <b>1.8000e-004</b> | <b>0.0000</b>  | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>0.1172</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 3/22/2022  | 5             | 20       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/30/2022 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 66****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 753,515; Non-Residential Outdoor: 251,172; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 42.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 211.00             | 82.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 2,285.00            | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 32.9656        | 0.0000        | 32.9656        | 4.9913         | 0.0000        | 4.9913        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |                | 1.2427        | 1.2427         |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>32.9656</b> | <b>1.2427</b> | <b>34.2082</b> | <b>4.9913</b>  | <b>1.1553</b> | <b>6.1465</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hauling      | 0.6927        | 26.6224        | 6.0703        | 0.0947        | 2.6664        | 0.1905        | 2.8569        | 0.7310         | 0.1822        | 0.9133        |          | 10,373.5217        | 10,373.5217        | 0.5499        | 1.6460        | 10,877.7615        |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Worker       | 0.0459        | 0.0328         | 0.4198        | 1.0700e-003   | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.4000e-004   | 0.0334        |          | 108.6516           | 108.6516           | 3.6800e-003   | 3.2000e-003   | 109.6966           |
| <b>Total</b> | <b>0.7386</b> | <b>26.6553</b> | <b>6.4900</b> | <b>0.0958</b> | <b>2.7896</b> | <b>0.1913</b> | <b>2.9809</b> | <b>0.7637</b>  | <b>0.1830</b> | <b>0.9467</b> |          | <b>10,482.1733</b> | <b>10,482.1733</b> | <b>0.5536</b> | <b>1.6492</b> | <b>10,987.4582</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 |               |               |                |               | 14.8345        | 0.0000        | 14.8345        | 2.2461         | 0.0000        | 2.2461        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |                | 0.0616        | 0.0616         |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>14.8345</b> | <b>0.0616</b> | <b>14.8961</b> | <b>2.2461</b>  | <b>0.0616</b> | <b>2.3077</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx            | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | lb/day        |                |               |               |               |               |               |                |               |               | lb/day   |                    |                    |               |               |                    |
| Hauling      | 0.6927        | 26.6224        | 6.0703        | 0.0947        | 2.6664        | 0.1905        | 2.8569        | 0.7310         | 0.1822        | 0.9133        |          | 10,373.5217        | 10,373.5217        | 0.5499        | 1.6460        | 10,877.7615        |
| Vendor       | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Worker       | 0.0459        | 0.0328         | 0.4198        | 1.0700e-003   | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.4000e-004   | 0.0334        |          | 108.6516           | 108.6516           | 3.6800e-003   | 3.2000e-003   | 109.6966           |
| <b>Total</b> | <b>0.7386</b> | <b>26.6553</b> | <b>6.4900</b> | <b>0.0958</b> | <b>2.7896</b> | <b>0.1913</b> | <b>2.9809</b> | <b>0.7637</b>  | <b>0.1830</b> | <b>0.9467</b> |          | <b>10,482.1733</b> | <b>10,482.1733</b> | <b>0.5536</b> | <b>1.6492</b> | <b>10,987.4582</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5597        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 144.8688        | 144.8688        | 4.9000e-003        | 4.2600e-003        | 146.2622        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5597</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>144.8688</b> | <b>144.8688</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>146.2622</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5597        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 144.8688        | 144.8688        | 4.9000e-003        | 4.2600e-003        | 146.2622        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5597</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>144.8688</b> | <b>144.8688</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>146.2622</b> |



## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.1657        | 4.3672        | 1.4626        | 0.0169        | 0.5556        | 0.0406        | 0.5961        | 0.1600         | 0.0388        | 0.1988        |          | 1,818.5252        | 1,818.5252        | 0.0606        | 0.2622        | 1,898.1659        |
| Worker       | 0.6459        | 0.4618        | 5.9045        | 0.0151        | 1.7333        | 0.0114        | 1.7447        | 0.4598         | 0.0105        | 0.4702        |          | 1,528.3660        | 1,528.3660        | 0.0518        | 0.0450        | 1,543.0661        |
| <b>Total</b> | <b>0.8116</b> | <b>4.8290</b> | <b>7.3670</b> | <b>0.0320</b> | <b>2.2889</b> | <b>0.0519</b> | <b>2.3408</b> | <b>0.6197</b>  | <b>0.0493</b> | <b>0.6690</b> |          | <b>3,346.8912</b> | <b>3,346.8912</b> | <b>0.1123</b> | <b>0.3072</b> | <b>3,441.2320</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.1657        | 4.3672        | 1.4626        | 0.0169        | 0.5556        | 0.0406        | 0.5961        | 0.1600         | 0.0388        | 0.1988        |          | 1,818.5252        | 1,818.5252        | 0.0606        | 0.2622        | 1,898.1659        |
| Worker       | 0.6459        | 0.4618        | 5.9045        | 0.0151        | 1.7333        | 0.0114        | 1.7447        | 0.4598         | 0.0105        | 0.4702        |          | 1,528.3660        | 1,528.3660        | 0.0518        | 0.0450        | 1,543.0661        |
| <b>Total</b> | <b>0.8116</b> | <b>4.8290</b> | <b>7.3670</b> | <b>0.0320</b> | <b>2.2889</b> | <b>0.0519</b> | <b>2.3408</b> | <b>0.6197</b>  | <b>0.0493</b> | <b>0.6690</b> |          | <b>3,346.8912</b> | <b>3,346.8912</b> | <b>0.1123</b> | <b>0.3072</b> | <b>3,441.2320</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4198</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>108.6516</b> | <b>108.6516</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>109.6966</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4198        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.4000e-004        | 0.0334        |          | 108.6516        | 108.6516        | 3.6800e-003        | 3.2000e-003        | 109.6966        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4198</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.4000e-004</b> | <b>0.0334</b> |          | <b>108.6516</b> | <b>108.6516</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>109.6966</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****3.6 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 | 174.6272        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>174.8318</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 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       | 0.1286        | 0.0919        | 1.1753        | 3.0100e-003        | 0.3450        | 2.2600e-003        | 0.3473        | 0.0915         | 2.0800e-003        | 0.0936        |          | 304.2245        | 304.2245        | 0.0103        | 8.9500e-003        | 307.1506        |
| <b>Total</b> | <b>0.1286</b> | <b>0.0919</b> | <b>1.1753</b> | <b>3.0100e-003</b> | <b>0.3450</b> | <b>2.2600e-003</b> | <b>0.3473</b> | <b>0.0915</b>  | <b>2.0800e-003</b> | <b>0.0936</b> |          | <b>304.2245</b> | <b>304.2245</b> | <b>0.0103</b> | <b>8.9500e-003</b> | <b>307.1506</b> |

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****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 | 174.6272        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297          | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>174.6569</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000             | 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       | 0.1286        | 0.0919        | 1.1753        | 3.0100e-003        | 0.3450        | 2.2600e-003        | 0.3473        | 0.0915         | 2.0800e-003        | 0.0936        |          | 304.2245        | 304.2245        | 0.0103        | 8.9500e-003        | 307.1506        |
| <b>Total</b> | <b>0.1286</b> | <b>0.0919</b> | <b>1.1753</b> | <b>3.0100e-003</b> | <b>0.3450</b> | <b>2.2600e-003</b> | <b>0.3473</b> | <b>0.0915</b>  | <b>2.0800e-003</b> | <b>0.0936</b> |          | <b>304.2245</b> | <b>304.2245</b> | <b>0.0103</b> | <b>8.9500e-003</b> | <b>307.1506</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use                         | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|----------------------------------|-------------------------|----------|--------|-------------|------------|
|                                  | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Unrefrigerated Warehouse-No Rail | 0.00                    | 0.00     | 0.00   |             |            |
| Total                            | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use                    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Unrefrigerated Warehouse-No | 9.50       | 7.30       | 7.30        | 59.00      | 0.00       | 41.00       | 92             | 5        | 3       |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

|                                  |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Unrefrigerated Warehouse-No Rail | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |



Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   |               |               |               |               |               |
| Unrefrigerated Warehouse-No Rail | 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        |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                                  | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|----------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use                         | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Unrefrigerated Warehouse-No Rail | 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        |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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   | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |     | 0.1172 |
| Unmitigated | 3.1943 | 4.7000e-004 | 0.0513 | 0.0000 |               | 1.8000e-004  | 1.8000e-004 |                | 1.8000e-004   | 1.8000e-004 |          | 0.1099    | 0.1099    | 2.9000e-004 |     | 0.1172 |

**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 | 3.1895        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.7500e-003   | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |     | 0.1172        |
| <b>Total</b>          | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> |               | <b>1.8000e-004</b> | <b>1.8000e-004</b> |                | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> |     | <b>0.1172</b> |

Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**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 | 3.1895        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000        |                    |               |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.7500e-003   | 4.7000e-004        | 0.0513        | 0.0000        |               | 1.8000e-004        | 1.8000e-004        |                | 1.8000e-004        | 1.8000e-004        |          | 0.1099        | 0.1099        | 2.9000e-004        |     | 0.1172        |
| <b>Total</b>          | <b>3.1943</b> | <b>4.7000e-004</b> | <b>0.0513</b> | <b>0.0000</b> |               | <b>1.8000e-004</b> | <b>1.8000e-004</b> |                | <b>1.8000e-004</b> | <b>1.8000e-004</b> |          | <b>0.1099</b> | <b>0.1099</b> | <b>2.9000e-004</b> |     | <b>0.1172</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Industrial Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

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## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - MFR construction Only****Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses           | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|----------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise | 1,045.00 | Dwelling Unit | 27.50       | 1,045,000.00       | 3598       |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions modeled separately

Road Dust - Operational Emissions modeled separately

Woodstoves - Operational Emissions modeled separately

Consumer Products - Operational Emissions modeled separately

Area Coating - Operational Emissions modeled separately

Landscape Equipment - Operational Emissions modeled separately

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

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

Energy Use - Operational Emissions modeled separately

Water And Wastewater - Operational Emissions modeled separately

Solid Waste - Operational Emissions modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering is compliant with AVAQMD regulations for reducing fugitive dust, it is not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 440.00    | 222.00       |
| tblConstructionPhase    | NumDays                      | 30.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 45.00     | 23.00        |
| tblConstructionPhase    | PhaseEndDate                 | 4/26/2024 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/19/2024 | 12/29/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/11/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 5/13/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/8/2024  | 4/12/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/9/2024  | 11/14/2022   |
| tblConstructionPhase    | PhaseStartDate               | 5/14/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/20/2024 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 741.44    | 0.00         |
| tblEnergyUse            | NT24E                        | 3,054.10  | 0.00         |
| tblEnergyUse            | NT24NG                       | 6,384.00  | 0.00         |

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

|                       |                          |               |          |
|-----------------------|--------------------------|---------------|----------|
| tblEnergyUse          | T24E                     | 53.81         | 0.00     |
| tblEnergyUse          | T24NG                    | 6,682.59      | 0.00     |
| tblFireplaces         | FireplaceDayYear         | 82.00         | 0.00     |
| tblFireplaces         | FireplaceHourDay         | 3.00          | 0.00     |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40      | 0.00     |
| tblFireplaces         | NumberGas                | 574.75        | 0.00     |
| tblFireplaces         | NumberNoFireplace        | 104.50        | 0.00     |
| tblFireplaces         | NumberWood               | 365.75        | 0.00     |
| tblLandscapeEquipment | NumberSummerDays         | 180           | 0        |
| tblLandUse            | Population               | 2,989.00      | 3,598.00 |
| tblRoadDust           | RoadPercentPave          | 100           | 0        |
| tblSolidWaste         | SolidWasteGenerationRate | 480.70        | 0.00     |
| tblVehicleTrips       | ST_TR                    | 4.91          | 0.00     |
| tblVehicleTrips       | SU_TR                    | 4.09          | 0.00     |
| tblVehicleTrips       | WD_TR                    | 5.44          | 0.00     |
| tblWater              | IndoorWaterUseRate       | 68,085,956.77 | 0.00     |
| tblWater              | OutdoorWaterUseRate      | 42,923,755.36 | 0.00     |
| tblWoodstoves         | NumberCatalytic          | 52.25         | 0.00     |
| tblWoodstoves         | NumberNoncatalytic       | 52.25         | 0.00     |
| tblWoodstoves         | WoodstoveDayYear         | 82.00         | 0.00     |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20      | 0.00     |

**2.0 Emissions Summary****2.1 Overall Construction****Unmitigated Construction**

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



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

|                |               |               |               |               | PM10          | PM10          | Total         | PM2.5         | PM2.5         | Total         |               |                   |                   |               |               |                   |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | tons/yr       |               |               |               |               |               |               |               |               |               | MT/yr         |                   |                   |               |               |                   |
| 2022           | 5.4504        | 3.4658        | 5.2978        | 0.0134        | 0.9029        | 0.1402        | 1.0431        | 0.2540        | 0.1313        | 0.3853        | 0.0000        | 1,221.1519        | 1,221.1519        | 0.1285        | 0.0537        | 1,240.3689        |
| <b>Maximum</b> | <b>5.4504</b> | <b>3.4658</b> | <b>5.2978</b> | <b>0.0134</b> | <b>0.9029</b> | <b>0.1402</b> | <b>1.0431</b> | <b>0.2540</b> | <b>0.1313</b> | <b>0.3853</b> | <b>0.0000</b> | <b>1,221.1519</b> | <b>1,221.1519</b> | <b>0.1285</b> | <b>0.0537</b> | <b>1,240.3689</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                   |                   |               |               |                   |
| 2022           | 5.2185        | 1.0550        | 4.9167        | 0.0124        | 0.8366        | 0.0165        | 0.8530        | 0.2296         | 0.0158        | 0.2455        | 0.0000        | 1,137.5210        | 1,137.5210        | 0.1230        | 0.0537        | 1,156.6010        |
| <b>Maximum</b> | <b>5.2185</b> | <b>1.0550</b> | <b>4.9167</b> | <b>0.0124</b> | <b>0.8366</b> | <b>0.0165</b> | <b>0.8530</b> | <b>0.2296</b>  | <b>0.0158</b> | <b>0.2455</b> | <b>0.0000</b> | <b>1,137.5210</b> | <b>1,137.5210</b> | <b>0.1230</b> | <b>0.0537</b> | <b>1,156.6010</b> |

|                          | ROG         | NOx          | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|--------------|-------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>4.25</b> | <b>69.56</b> | <b>7.19</b> | <b>7.56</b> | <b>7.35</b>   | <b>88.24</b> | <b>18.22</b> | <b>9.58</b>    | <b>87.93</b>  | <b>36.28</b> | <b>0.00</b> | <b>6.85</b> | <b>6.85</b> | <b>4.26</b> | <b>0.00</b> | <b>6.75</b> |

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



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/23/2022  | 5             | 23       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/29/2022 | 5             | 222      |                   |

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

|   |                       |                       |            |            |   |    |
|---|-----------------------|-----------------------|------------|------------|---|----|
| 4 | Paving                | Paving                | 2/23/2022  | 4/12/2022  | 5 | 35 |
| 5 | Architectural Coating | Architectural Coating | 11/14/2022 | 12/30/2022 | 5 | 35 |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 69****Acres of Paving: 0****Residential Indoor: 2,116,125; Residential Outdoor: 705,375; 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 |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

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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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 150.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 752.00             | 112.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 136.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 0.0148        | 0.0000             | 0.0148        | 2.2400e-003        | 0.0000             | 2.2400e-003   | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0198        | 0.1929        | 0.1545        | 2.9000e-004        |               | 9.3200e-003        | 9.3200e-003   |                    | 8.6600e-003        | 8.6600e-003   | 0.0000        | 25.4927        | 25.4927        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>0.0198</b> | <b>0.1929</b> | <b>0.1545</b> | <b>2.9000e-004</b> | <b>0.0148</b> | <b>9.3200e-003</b> | <b>0.0241</b> | <b>2.2400e-003</b> | <b>8.6600e-003</b> | <b>0.0109</b> | <b>0.0000</b> | <b>25.4927</b> | <b>25.4927</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 3.1000e-004        | 0.0120        | 2.6800e-003        | 4.0000e-005        | 1.1700e-003        | 8.0000e-005        | 1.2500e-003        | 3.2000e-004        | 8.0000e-005        | 4.0000e-004        | 0.0000        | 4.2001        | 4.2001        | 2.2000e-004        | 6.7000e-004        | 4.4043        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.2000e-004        | 2.5000e-004   | 3.2300e-003        | 1.0000e-005        | 9.1000e-004        | 1.0000e-005        | 9.1000e-004        | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7551        | 0.7551        | 2.0000e-005        | 2.0000e-005        | 0.7623        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>0.0123</b> | <b>5.9100e-003</b> | <b>5.0000e-005</b> | <b>2.0800e-003</b> | <b>9.0000e-005</b> | <b>2.1600e-003</b> | <b>5.6000e-004</b> | <b>9.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>4.9552</b> | <b>4.9552</b> | <b>2.4000e-004</b> | <b>6.9000e-004</b> | <b>5.1666</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 6.6400e-003        | 0.0000             | 6.6400e-003        | 1.0100e-003        | 0.0000             | 1.0100e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 3.4700e-003        | 0.0150        | 0.1746        | 2.9000e-004        |                    | 4.6000e-004        | 4.6000e-004        |                    | 4.6000e-004        | 4.6000e-004        | 0.0000        | 25.4926        | 25.4926        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>3.4700e-003</b> | <b>0.0150</b> | <b>0.1746</b> | <b>2.9000e-004</b> | <b>6.6400e-003</b> | <b>4.6000e-004</b> | <b>7.1000e-003</b> | <b>1.0100e-003</b> | <b>4.6000e-004</b> | <b>1.4700e-003</b> | <b>0.0000</b> | <b>25.4926</b> | <b>25.4926</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 3.1000e-004        | 0.0120        | 2.6800e-003        | 4.0000e-005        | 1.1700e-003        | 8.0000e-005        | 1.2500e-003        | 3.2000e-004        | 8.0000e-005        | 4.0000e-004        | 0.0000        | 4.2001        | 4.2001        | 2.2000e-004        | 6.7000e-004        | 4.4043        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.2000e-004        | 2.5000e-004   | 3.2300e-003        | 1.0000e-005        | 9.1000e-004        | 1.0000e-005        | 9.1000e-004        | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7551        | 0.7551        | 2.0000e-005        | 2.0000e-005        | 0.7623        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>0.0123</b> | <b>5.9100e-003</b> | <b>5.0000e-005</b> | <b>2.0800e-003</b> | <b>9.0000e-005</b> | <b>2.1600e-003</b> | <b>5.6000e-004</b> | <b>9.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>4.9552</b> | <b>4.9552</b> | <b>2.4000e-004</b> | <b>6.9000e-004</b> | <b>5.1666</b> |

**3.3 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 |               |               |               |                    | 0.1058        | 0.0000        | 0.1058        | 0.0420         | 0.0000        | 0.0420        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0417        | 0.4467        | 0.3340        | 7.1000e-004        |               | 0.0188        | 0.0188        |                | 0.0173        | 0.0173        | 0.0000        | 62.7148        | 62.7148        | 0.0203        | 0.0000        | 63.2219        |
| <b>Total</b>  | <b>0.0417</b> | <b>0.4467</b> | <b>0.3340</b> | <b>7.1000e-004</b> | <b>0.1058</b> | <b>0.0188</b> | <b>0.1246</b> | <b>0.0420</b>  | <b>0.0173</b> | <b>0.0593</b> | <b>0.0000</b> | <b>62.7148</b> | <b>62.7148</b> | <b>0.0203</b> | <b>0.0000</b> | <b>63.2219</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.6000e-004        | 5.1000e-004        | 6.5900e-003        | 2.0000e-005        | 1.8500e-003        | 1.0000e-005        | 1.8600e-003        | 4.9000e-004        | 1.0000e-005        | 5.0000e-004        | 0.0000        | 1.5438        | 1.5438        | 5.0000e-005        | 5.0000e-005        | 1.5585        |
| <b>Total</b> | <b>6.6000e-004</b> | <b>5.1000e-004</b> | <b>6.5900e-003</b> | <b>2.0000e-005</b> | <b>1.8500e-003</b> | <b>1.0000e-005</b> | <b>1.8600e-003</b> | <b>4.9000e-004</b> | <b>1.0000e-005</b> | <b>5.0000e-004</b> | <b>0.0000</b> | <b>1.5438</b> | <b>1.5438</b> | <b>5.0000e-005</b> | <b>5.0000e-005</b> | <b>1.5585</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0476        | 0.0000             | 0.0476        | 0.0189         | 0.0000             | 0.0189        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 8.7600e-003        | 0.0380        | 0.3795        | 7.1000e-004        |               | 1.1700e-003        | 1.1700e-003   |                | 1.1700e-003        | 1.1700e-003   | 0.0000        | 62.7147        | 62.7147        | 0.0203        | 0.0000        | 63.2218        |
| <b>Total</b>  | <b>8.7600e-003</b> | <b>0.0380</b> | <b>0.3795</b> | <b>7.1000e-004</b> | <b>0.0476</b> | <b>1.1700e-003</b> | <b>0.0488</b> | <b>0.0189</b>  | <b>1.1700e-003</b> | <b>0.0201</b> | <b>0.0000</b> | <b>62.7147</b> | <b>62.7147</b> | <b>0.0203</b> | <b>0.0000</b> | <b>63.2218</b> |



Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

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

**Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.6000e-004        | 5.1000e-004        | 6.5900e-003        | 2.0000e-005        | 1.8500e-003        | 1.0000e-005        | 1.8600e-003        | 4.9000e-004        | 1.0000e-005        | 5.0000e-004        | 0.0000        | 1.5438        | 1.5438        | 5.0000e-005        | 5.0000e-005        | 1.5585        |
| <b>Total</b> | <b>6.6000e-004</b> | <b>5.1000e-004</b> | <b>6.5900e-003</b> | <b>2.0000e-005</b> | <b>1.8500e-003</b> | <b>1.0000e-005</b> | <b>1.8600e-003</b> | <b>4.9000e-004</b> | <b>1.0000e-005</b> | <b>5.0000e-004</b> | <b>0.0000</b> | <b>1.5438</b> | <b>1.5438</b> | <b>5.0000e-005</b> | <b>5.0000e-005</b> | <b>1.5585</b> |

**3.4 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     | 0.1894        | 1.7333        | 1.8163        | 2.9900e-003        |               | 0.0898        | 0.0898        |                | 0.0845        | 0.0845        | 0.0000        | 257.2150        | 257.2150        | 0.0616        | 0.0000        | 258.7556        |
| <b>Total</b> | <b>0.1894</b> | <b>1.7333</b> | <b>1.8163</b> | <b>2.9900e-003</b> |               | <b>0.0898</b> | <b>0.0898</b> |                | <b>0.0845</b> | <b>0.0845</b> | <b>0.0000</b> | <b>257.2150</b> | <b>257.2150</b> | <b>0.0616</b> | <b>0.0000</b> | <b>258.7556</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 0.0252        | 0.6678        | 0.2178        | 2.5700e-003        | 0.0829        | 6.1400e-003   | 0.0890        | 0.0239         | 5.8700e-003   | 0.0298        | 0.0000        | 250.0651        | 250.0651        | 8.3400e-003   | 0.0361        | 261.0180        |
| Worker       | 0.2378        | 0.1865        | 2.3931        | 6.0700e-003        | 0.6722        | 4.5000e-003   | 0.6767        | 0.1786         | 4.1500e-003   | 0.1827        | 0.0000        | 560.2679        | 560.2679        | 0.0185        | 0.0164        | 565.6040        |
| <b>Total</b> | <b>0.2630</b> | <b>0.8543</b> | <b>2.6109</b> | <b>8.6400e-003</b> | <b>0.7551</b> | <b>0.0106</b> | <b>0.7658</b> | <b>0.2025</b>  | <b>0.0100</b> | <b>0.2125</b> | <b>0.0000</b> | <b>810.3329</b> | <b>810.3329</b> | <b>0.0269</b> | <b>0.0524</b> | <b>826.6221</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0242        | 0.1050        | 1.3217        | 1.9800e-003        |               | 3.2300e-003        | 3.2300e-003        |                | 3.2300e-003        | 3.2300e-003        | 0.0000        | 173.5843        | 173.5843        | 0.0561        | 0.0000        | 174.9878        |
| <b>Total</b> | <b>0.0242</b> | <b>0.1050</b> | <b>1.3217</b> | <b>1.9800e-003</b> |               | <b>3.2300e-003</b> | <b>3.2300e-003</b> |                | <b>3.2300e-003</b> | <b>3.2300e-003</b> | <b>0.0000</b> | <b>173.5843</b> | <b>173.5843</b> | <b>0.0561</b> | <b>0.0000</b> | <b>174.9878</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 0.0252        | 0.6678        | 0.2178        | 2.5700e-003        | 0.0829        | 6.1400e-003   | 0.0890        | 0.0239         | 5.8700e-003   | 0.0298        | 0.0000        | 250.0651        | 250.0651        | 8.3400e-003   | 0.0361        | 261.0180        |
| Worker       | 0.2378        | 0.1865        | 2.3931        | 6.0700e-003        | 0.6722        | 4.5000e-003   | 0.6767        | 0.1786         | 4.1500e-003   | 0.1827        | 0.0000        | 560.2679        | 560.2679        | 0.0185        | 0.0164        | 565.6040        |
| <b>Total</b> | <b>0.2630</b> | <b>0.8543</b> | <b>2.6109</b> | <b>8.6400e-003</b> | <b>0.7551</b> | <b>0.0106</b> | <b>0.7658</b> | <b>0.2025</b>  | <b>0.0100</b> | <b>0.2125</b> | <b>0.0000</b> | <b>810.3329</b> | <b>810.3329</b> | <b>0.0269</b> | <b>0.0524</b> | <b>826.6221</b> |

**3.5 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     | 0.0193        | 0.1947        | 0.2552        | 4.0000e-004        |               | 9.9400e-003        | 9.9400e-003        |                | 9.1400e-003        | 9.1400e-003        | 0.0000        | 35.0482        | 35.0482        | 0.0113        | 0.0000        | 35.3316        |
| Paving       | 0.0000        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0193</b> | <b>0.1947</b> | <b>0.2552</b> | <b>4.0000e-004</b> |               | <b>9.9400e-003</b> | <b>9.9400e-003</b> |                | <b>9.1400e-003</b> | <b>9.1400e-003</b> | <b>0.0000</b> | <b>35.0482</b> | <b>35.0482</b> | <b>0.0113</b> | <b>0.0000</b> | <b>35.3316</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 7.5000e-004        | 5.9000e-004        | 7.5300e-003        | 2.0000e-005        | 2.1100e-003        | 1.0000e-005        | 2.1300e-003        | 5.6000e-004        | 1.0000e-005        | 5.7000e-004        | 0.0000        | 1.7619        | 1.7619        | 6.0000e-005        | 5.0000e-005        | 1.7787        |
| <b>Total</b> | <b>7.5000e-004</b> | <b>5.9000e-004</b> | <b>7.5300e-003</b> | <b>2.0000e-005</b> | <b>2.1100e-003</b> | <b>1.0000e-005</b> | <b>2.1300e-003</b> | <b>5.6000e-004</b> | <b>1.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.7619</b> | <b>1.7619</b> | <b>6.0000e-005</b> | <b>5.0000e-005</b> | <b>1.7787</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |               |               |                |
| Off-Road     | 4.9100e-003        | 0.0213        | 0.3027        | 4.0000e-004        |               | 6.5000e-004        | 6.5000e-004        |                | 6.5000e-004        | 6.5000e-004        | 0.0000        | 35.0482        | 35.0482        | 0.0113        | 0.0000        | 35.3316        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>4.9100e-003</b> | <b>0.0213</b> | <b>0.3027</b> | <b>4.0000e-004</b> |               | <b>6.5000e-004</b> | <b>6.5000e-004</b> |                | <b>6.5000e-004</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>35.0482</b> | <b>35.0482</b> | <b>0.0113</b> | <b>0.0000</b> | <b>35.3316</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 7.5000e-004        | 5.9000e-004        | 7.5300e-003        | 2.0000e-005        | 2.1100e-003        | 1.0000e-005        | 2.1300e-003        | 5.6000e-004        | 1.0000e-005        | 5.7000e-004        | 0.0000        | 1.7619        | 1.7619        | 6.0000e-005        | 5.0000e-005        | 1.7787        |
| <b>Total</b> | <b>7.5000e-004</b> | <b>5.9000e-004</b> | <b>7.5300e-003</b> | <b>2.0000e-005</b> | <b>2.1100e-003</b> | <b>1.0000e-005</b> | <b>2.1300e-003</b> | <b>5.6000e-004</b> | <b>1.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.7619</b> | <b>1.7619</b> | <b>6.0000e-005</b> | <b>5.0000e-005</b> | <b>1.7787</b> |

**3.6 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 | 4.9041        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.5800e-003   | 0.0247        | 0.0317        | 5.0000e-005        |               | 1.4300e-003        | 1.4300e-003        |                | 1.4300e-003        | 1.4300e-003        | 0.0000        | 4.4682        | 4.4682        | 2.9000e-004        | 0.0000        | 4.4755        |
| <b>Total</b>    | <b>4.9077</b> | <b>0.0247</b> | <b>0.0317</b> | <b>5.0000e-005</b> |               | <b>1.4300e-003</b> | <b>1.4300e-003</b> |                | <b>1.4300e-003</b> | <b>1.4300e-003</b> | <b>0.0000</b> | <b>4.4682</b> | <b>4.4682</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>4.4755</b> |

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

**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       | 7.4800e-003        | 5.8600e-003        | 0.0753        | 1.9000e-004        | 0.0211        | 1.4000e-004        | 0.0213        | 5.6200e-003        | 1.3000e-004        | 5.7500e-003        | 0.0000        | 17.6191        | 17.6191        | 5.8000e-004        | 5.1000e-004        | 17.7869        |
| <b>Total</b> | <b>7.4800e-003</b> | <b>5.8600e-003</b> | <b>0.0753</b> | <b>1.9000e-004</b> | <b>0.0211</b> | <b>1.4000e-004</b> | <b>0.0213</b> | <b>5.6200e-003</b> | <b>1.3000e-004</b> | <b>5.7500e-003</b> | <b>0.0000</b> | <b>17.6191</b> | <b>17.6191</b> | <b>5.8000e-004</b> | <b>5.1000e-004</b> | <b>17.7869</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 4.9041        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 5.2000e-004   | 2.2500e-003        | 0.0321        | 5.0000e-005        |               | 7.0000e-005        | 7.0000e-005        |                | 7.0000e-005        | 7.0000e-005        | 0.0000        | 4.4682        | 4.4682        | 2.9000e-004        | 0.0000        | 4.4755        |
| <b>Total</b>    | <b>4.9046</b> | <b>2.2500e-003</b> | <b>0.0321</b> | <b>5.0000e-005</b> |               | <b>7.0000e-005</b> | <b>7.0000e-005</b> |                | <b>7.0000e-005</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>4.4682</b> | <b>4.4682</b> | <b>2.9000e-004</b> | <b>0.0000</b> | <b>4.4755</b> |



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

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Mid Rise | 0.00                    | 0.00     | 0.00   |             |            |
| Total               | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise | 10.80      | 7.30       | 7.50        | 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 | 0.544785 | 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





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

**Mitigated**

|                     | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use            | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Apartments Mid Rise | 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        |
| <b>Total</b>        |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                     | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use            | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Apartments Mid Rise | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>        |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|           | Total CO2 | CH4    | N2O    | CO2e   |  |
|-----------|-----------|--------|--------|--------|--|
| Category  | tons/yr   | MT/yr  |        |        |  |
| Mitigated | 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**

|             |  |        |        |        |        |
|-------------|--|--------|--------|--------|--------|
| Unmitigated |  | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--|--------|--------|--------|--------|

**7.2 Water by Land Use**

**Unmitigated**

|                        | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | tons/yr | MT/yr         |               |               |               |
| Apartments<br>Mid Rise | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>           |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

**Mitigated**

|                     | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use            | Mgal               | tons/yr | MT/yr         |               |               |               |
| Apartments Mid Rise | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>        |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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**

**8.2 Waste by Land Use**

**Unmitigated**

|                     | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | tons/yr | MT/yr         |               |               |               |
| Apartments Mid Rise | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>        |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                     | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use            | tons           | tons/yr | MT/yr         |               |               |               |
| Apartments Mid Rise | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>        |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - MFR construction Only****Los Angeles-Mojave Desert County, Summer****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses           | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|----------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise | 1,045.00 | Dwelling Unit | 27.50       | 1,045,000.00       | 3598       |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions modeled separately

Road Dust - Operational Emissions modeled separately

Woodstoves - Operational Emissions modeled separately

Consumer Products - Operational Emissions modeled separately

Area Coating - Operational Emissions modeled separately

Landscape Equipment - Operational Emissions modeled separately

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

Energy Use - Operational Emissions modeled separately

Water And Wastewater - Operational Emissions modeled separately

Solid Waste - Operational Emissions modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering is compliant with AVAQMD regulations for reducing fugitive dust, it is not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 440.00    | 222.00       |
| tblConstructionPhase    | NumDays                      | 30.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 45.00     | 23.00        |
| tblConstructionPhase    | PhaseEndDate                 | 4/26/2024 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/19/2024 | 12/29/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/11/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 5/13/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/8/2024  | 4/12/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/9/2024  | 11/14/2022   |
| tblConstructionPhase    | PhaseStartDate               | 5/14/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/20/2024 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 741.44    | 0.00         |
| tblEnergyUse            | NT24E                        | 3,054.10  | 0.00         |
| tblEnergyUse            | NT24NG                       | 6,384.00  | 0.00         |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

|                       |                          |               |          |
|-----------------------|--------------------------|---------------|----------|
| tblEnergyUse          | T24E                     | 53.81         | 0.00     |
| tblEnergyUse          | T24NG                    | 6,682.59      | 0.00     |
| tblFireplaces         | FireplaceDayYear         | 82.00         | 0.00     |
| tblFireplaces         | FireplaceHourDay         | 3.00          | 0.00     |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40      | 0.00     |
| tblFireplaces         | NumberGas                | 574.75        | 0.00     |
| tblFireplaces         | NumberNoFireplace        | 104.50        | 0.00     |
| tblFireplaces         | NumberWood               | 365.75        | 0.00     |
| tblLandscapeEquipment | NumberSummerDays         | 180           | 0        |
| tblLandUse            | Population               | 2,989.00      | 3,598.00 |
| tblRoadDust           | RoadPercentPave          | 100           | 0        |
| tblSolidWaste         | SolidWasteGenerationRate | 480.70        | 0.00     |
| tblVehicleTrips       | ST_TR                    | 4.91          | 0.00     |
| tblVehicleTrips       | SU_TR                    | 4.09          | 0.00     |
| tblVehicleTrips       | WD_TR                    | 5.44          | 0.00     |
| tblWater              | IndoorWaterUseRate       | 68,085,956.77 | 0.00     |
| tblWater              | OutdoorWaterUseRate      | 42,923,755.36 | 0.00     |
| tblWoodstoves         | NumberCatalytic          | 52.25         | 0.00     |
| tblWoodstoves         | NumberNoncatalytic       | 52.25         | 0.00     |
| tblWoodstoves         | WoodstoveDayYear         | 82.00         | 0.00     |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20      | 0.00     |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

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

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

|                |                 |                |                |               | PM10           | PM10          | Total          | PM2.5         | PM2.5         | Total         |               |                    |                    |               |               |                    |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |               |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 284.9914        | 72.8733        | 85.6523        | 0.1944        | 16.4274        | 3.1095        | 19.5369        | 5.5870        | 2.8796        | 8.4667        | 0.0000        | 19,312.2065        | 19,312.2065        | 3.5408        | 0.5377        | 19,554.1056        |
| <b>Maximum</b> | <b>284.9914</b> | <b>72.8733</b> | <b>85.6523</b> | <b>0.1944</b> | <b>16.4274</b> | <b>3.1095</b> | <b>19.5369</b> | <b>5.5870</b> | <b>2.8796</b> | <b>8.4667</b> | <b>0.0000</b> | <b>19,312.2065</b> | <b>19,312.2065</b> | <b>3.5408</b> | <b>0.5377</b> | <b>19,554.1056</b> |

**Mitigated Construction**

|                | ROG             | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |                |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 283.3285        | 12.7504        | 87.8688        | 0.1853        | 11.3654        | 0.2657        | 11.6312        | 3.5775         | 0.2599        | 3.8374        | 0.0000        | 18,481.6942        | 18,481.6942        | 3.4863        | 0.5377        | 18,722.2327        |
| <b>Maximum</b> | <b>283.3285</b> | <b>12.7504</b> | <b>87.8688</b> | <b>0.1853</b> | <b>11.3654</b> | <b>0.2657</b> | <b>11.6312</b> | <b>3.5775</b>  | <b>0.2599</b> | <b>3.8374</b> | <b>0.0000</b> | <b>18,481.6942</b> | <b>18,481.6942</b> | <b>3.4863</b> | <b>0.5377</b> | <b>18,722.2327</b> |

|                          | ROG         | NOx          | CO           | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.58</b> | <b>82.50</b> | <b>-2.59</b> | <b>4.70</b> | <b>30.81</b>  | <b>91.45</b> | <b>40.47</b> | <b>35.97</b>   | <b>90.97</b>  | <b>54.68</b> | <b>0.00</b> | <b>4.30</b> | <b>4.30</b> | <b>1.54</b> | <b>0.00</b> | <b>4.25</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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         | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        | 0.0000        | 155.2372        | 155.2372        | 0.1493        | 0.0000        | 158.9691        |
| Energy       | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Mobile       | 0.0000        | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> | <b>0.0000</b> | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b>  | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

**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         | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        | 0.0000        | 155.2372        | 155.2372        | 0.1493        | 0.0000        | 158.9691        |
| Energy       | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Mobile       | 0.0000        | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> | <b>0.0000</b> | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b>  | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/23/2022  | 5             | 23       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/29/2022 | 5             | 222      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 4/12/2022  | 5             | 35       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/14/2022 | 12/30/2022 | 5             | 35       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 69****Acres of Paving: 0****Residential Indoor: 2,116,125; Residential Outdoor: 705,375; 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 |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |



Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 150.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 752.00             | 112.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 136.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022**

**Unmitigated Construction On-Site**

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 1.9687        | 0.0000        | 1.9687        | 0.2981         | 0.0000        | 0.2981        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |               | 1.2427        | 1.2427        |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>1.9687</b> | <b>1.2427</b> | <b>3.2114</b> | <b>0.2981</b>  | <b>1.1553</b> | <b>1.4533</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0422        | 1.5227        | 0.3551        | 5.6300e-003        | 0.1587        | 0.0113        | 0.1700        | 0.0435         | 0.0108        | 0.0543        |          | 617.2365        | 617.2365        | 0.0328        | 0.0979        | 647.2400        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.5000e-004   | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003   | 2.9900e-003   | 116.4043        |
| <b>Total</b> | <b>0.0858</b> | <b>1.5525</b> | <b>0.8074</b> | <b>6.7600e-003</b> | <b>0.2819</b> | <b>0.0121</b> | <b>0.2940</b> | <b>0.0762</b>  | <b>0.0116</b> | <b>0.0878</b> |          | <b>732.6593</b> | <b>732.6593</b> | <b>0.0364</b> | <b>0.1009</b> | <b>763.6443</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 0.8859        | 0.0000        | 0.8859        | 0.1341         | 0.0000        | 0.1341        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |               | 0.0616        | 0.0616        |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>0.8859</b> | <b>0.0616</b> | <b>0.9476</b> | <b>0.1341</b>  | <b>0.0616</b> | <b>0.1958</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0422        | 1.5227        | 0.3551        | 5.6300e-003        | 0.1587        | 0.0113        | 0.1700        | 0.0435         | 0.0108        | 0.0543        |          | 617.2365        | 617.2365        | 0.0328        | 0.0979        | 647.2400        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.5000e-004   | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003   | 2.9900e-003   | 116.4043        |
| <b>Total</b> | <b>0.0858</b> | <b>1.5525</b> | <b>0.8074</b> | <b>6.7600e-003</b> | <b>0.2819</b> | <b>0.0121</b> | <b>0.2940</b> | <b>0.0762</b>  | <b>0.0116</b> | <b>0.0878</b> |          | <b>732.6593</b> | <b>732.6593</b> | <b>0.0364</b> | <b>0.1009</b> | <b>763.6443</b> |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

**3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003        | 155.2057        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0397</b> | <b>0.6032</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>153.8970</b> | <b>153.8970</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>155.2057</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003        | 155.2057        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0397</b> | <b>0.6032</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>153.8970</b> | <b>153.8970</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>155.2057</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.2288        | 5.7290        | 1.9330         | 0.0231        | 0.7588        | 0.0552        | 0.8140        | 0.2185         | 0.0528        | 0.2713        |          | 2,482.9544        | 2,482.9544        | 0.0830        | 0.3576        | 2,591.6036        |
| Worker       | 2.1813        | 1.4908        | 22.6784        | 0.0569        | 6.1775        | 0.0406        | 6.2181        | 1.6386         | 0.0374        | 1.6759        |          | 5,786.5279        | 5,786.5279        | 0.1793        | 0.1501        | 5,835.7337        |
| <b>Total</b> | <b>2.4101</b> | <b>7.2199</b> | <b>24.6114</b> | <b>0.0800</b> | <b>6.9363</b> | <b>0.0958</b> | <b>7.0321</b> | <b>1.8570</b>  | <b>0.0902</b> | <b>1.9472</b> |          | <b>8,269.4823</b> | <b>8,269.4823</b> | <b>0.2623</b> | <b>0.5077</b> | <b>8,427.3373</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.2288        | 5.7290        | 1.9330         | 0.0231        | 0.7588        | 0.0552        | 0.8140        | 0.2185         | 0.0528        | 0.2713        |          | 2,482.9544        | 2,482.9544        | 0.0830        | 0.3576        | 2,591.6036        |
| Worker       | 2.1813        | 1.4908        | 22.6784        | 0.0569        | 6.1775        | 0.0406        | 6.2181        | 1.6386         | 0.0374        | 1.6759        |          | 5,786.5279        | 5,786.5279        | 0.1793        | 0.1501        | 5,835.7337        |
| <b>Total</b> | <b>2.4101</b> | <b>7.2199</b> | <b>24.6114</b> | <b>0.0800</b> | <b>6.9363</b> | <b>0.0958</b> | <b>7.0321</b> | <b>1.8570</b>  | <b>0.0902</b> | <b>1.9472</b> |          | <b>8,269.4823</b> | <b>8,269.4823</b> | <b>0.2623</b> | <b>0.5077</b> | <b>8,427.3373</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003        | 2.9900e-003        | 116.4043        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4524</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>115.4228</b> | <b>115.4228</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>116.4043</b> |



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003        | 2.9900e-003        | 116.4043        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4524</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>115.4228</b> | <b>115.4228</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>116.4043</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 280.2354        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>280.4400</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |                    |               |                |                    |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 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       | 0.4351        | 0.2974        | 4.5236        | 0.0114        | 1.2322        | 8.0900e-003        | 1.2403        | 0.3268         | 7.4500e-003        | 0.3343        |          | 1,154.2276        | 1,154.2276        | 0.0358        | 0.0299        | 1,164.0426        |
| <b>Total</b> | <b>0.4351</b> | <b>0.2974</b> | <b>4.5236</b> | <b>0.0114</b> | <b>1.2322</b> | <b>8.0900e-003</b> | <b>1.2403</b> | <b>0.3268</b>  | <b>7.4500e-003</b> | <b>0.3343</b> |          | <b>1,154.2276</b> | <b>1,154.2276</b> | <b>0.0358</b> | <b>0.0299</b> | <b>1,164.0426</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 280.2354        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297          | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>280.2651</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |                    |               |                |                    |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 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       | 0.4351        | 0.2974        | 4.5236        | 0.0114        | 1.2322        | 8.0900e-003        | 1.2403        | 0.3268         | 7.4500e-003        | 0.3343        |          | 1,154.2276        | 1,154.2276        | 0.0358        | 0.0299        | 1,164.0426        |
| <b>Total</b> | <b>0.4351</b> | <b>0.2974</b> | <b>4.5236</b> | <b>0.0114</b> | <b>1.2322</b> | <b>8.0900e-003</b> | <b>1.2403</b> | <b>0.3268</b>  | <b>7.4500e-003</b> | <b>0.3343</b> |          | <b>1,154.2276</b> | <b>1,154.2276</b> | <b>0.0358</b> | <b>0.0299</b> | <b>1,164.0426</b> |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Mid Rise | 0.00                    | 0.00     | 0.00   |             |            |
| Total               | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise | 10.80      | 7.30       | 7.50        | 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 |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

|                     |          |          |          |          |          |          |          |          |          |          |          |          |          |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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 | 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        |
| <b>Total</b>        |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                     | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use            | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Mid Rise | 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        |
| <b>Total</b>        |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   | 2.5979 | 0.9940 | 86.2330 | 4.5500e-003 |               | 0.4773       | 0.4773     |                | 0.4773        | 0.4773      | 0.0000   | 155.2372  | 155.2372  | 0.1493 | 0.0000 | 158.9691 |
| Unmitigated | 2.5979 | 0.9940 | 86.2330 | 4.5500e-003 |               | 0.4773       | 0.4773     |                | 0.4773        | 0.4773      | 0.0000   | 155.2372  | 155.2372  | 0.1493 | 0.0000 | 158.9691 |

**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 | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Consumer Products     | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Hearth                | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Landscaping           | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        |               | 155.2372        | 155.2372        | 0.1493        |               | 158.9691        |
| <b>Total</b>          | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> |               | <b>0.4773</b> | <b>0.4773</b> |                | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

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

**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 | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Consumer Products     | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Hearth                | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Landscaping           | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        |               | 155.2372        | 155.2372        | 0.1493        |               | 158.9691        |
| <b>Total</b>          | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> |               | <b>0.4773</b> | <b>0.4773</b> |                | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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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Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - MFR construction Only**

Los Angeles-Mojave Desert County, Winter

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses           | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|---------------------|----------|---------------|-------------|--------------------|------------|
| Apartments Mid Rise | 1,045.00 | Dwelling Unit | 27.50       | 1,045,000.00       | 3598       |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational Emissions modeled separately

Road Dust - Operational Emissions modeled separately

Woodstoves - Operational Emissions modeled separately

Consumer Products - Operational Emissions modeled separately

Area Coating - Operational Emissions modeled separately

Landscape Equipment - Operational Emissions modeled separately

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

Energy Use - Operational Emissions modeled separately

Water And Wastewater - Operational Emissions modeled separately

Solid Waste - Operational Emissions modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering is compliant with AVAQMD regulations for reducing fugitive dust, it is not mitigation

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 440.00    | 222.00       |
| tblConstructionPhase    | NumDays                      | 30.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 45.00     | 23.00        |
| tblConstructionPhase    | PhaseEndDate                 | 4/26/2024 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/19/2024 | 12/29/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 2/11/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 5/13/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/8/2024  | 4/12/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/9/2024  | 11/14/2022   |
| tblConstructionPhase    | PhaseStartDate               | 5/14/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 1/20/2024 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 741.44    | 0.00         |
| tblEnergyUse            | NT24E                        | 3,054.10  | 0.00         |
| tblEnergyUse            | NT24NG                       | 6,384.00  | 0.00         |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

|                       |                          |               |          |
|-----------------------|--------------------------|---------------|----------|
| tblEnergyUse          | T24E                     | 53.81         | 0.00     |
| tblEnergyUse          | T24NG                    | 6,682.59      | 0.00     |
| tblFireplaces         | FireplaceDayYear         | 82.00         | 0.00     |
| tblFireplaces         | FireplaceHourDay         | 3.00          | 0.00     |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40      | 0.00     |
| tblFireplaces         | NumberGas                | 574.75        | 0.00     |
| tblFireplaces         | NumberNoFireplace        | 104.50        | 0.00     |
| tblFireplaces         | NumberWood               | 365.75        | 0.00     |
| tblLandscapeEquipment | NumberSummerDays         | 180           | 0        |
| tblLandUse            | Population               | 2,989.00      | 3,598.00 |
| tblRoadDust           | RoadPercentPave          | 100           | 0        |
| tblSolidWaste         | SolidWasteGenerationRate | 480.70        | 0.00     |
| tblVehicleTrips       | ST_TR                    | 4.91          | 0.00     |
| tblVehicleTrips       | SU_TR                    | 4.09          | 0.00     |
| tblVehicleTrips       | WD_TR                    | 5.44          | 0.00     |
| tblWater              | IndoorWaterUseRate       | 68,085,956.77 | 0.00     |
| tblWater              | OutdoorWaterUseRate      | 42,923,755.36 | 0.00     |
| tblWoodstoves         | NumberCatalytic          | 52.25         | 0.00     |
| tblWoodstoves         | NumberNoncatalytic       | 52.25         | 0.00     |
| tblWoodstoves         | WoodstoveDayYear         | 82.00         | 0.00     |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20      | 0.00     |

**2.0 Emissions Summary****2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

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

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

|                |                 |                |                |               | PM10           | PM10          | Total          | PM2.5         | PM2.5         | Total         |               |                    |                    |               |               |                    |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |               |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 285.1345        | 73.2721        | 84.0367        | 0.1913        | 16.4274        | 3.1097        | 19.5371        | 5.5870        | 2.8798        | 8.4669        | 0.0000        | 18,994.6985        | 18,994.6985        | 3.5459        | 0.5504        | 19,240.0595        |
| <b>Maximum</b> | <b>285.1345</b> | <b>73.2721</b> | <b>84.0367</b> | <b>0.1913</b> | <b>16.4274</b> | <b>3.1097</b> | <b>19.5371</b> | <b>5.5870</b> | <b>2.8798</b> | <b>8.4669</b> | <b>0.0000</b> | <b>18,994.6985</b> | <b>18,994.6985</b> | <b>3.5459</b> | <b>0.5504</b> | <b>19,240.0595</b> |

**Mitigated Construction**

|                | ROG             | NOx            | CO             | SO2           | Fugitive PM10  | Exhaust PM10  | PM10 Total     | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|----------------|-----------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Year           | lb/day          |                |                |               |                |               |                |                |               |               | lb/day        |                    |                    |               |               |                    |
| 2022           | 283.4717        | 13.1492        | 86.2531        | 0.1822        | 11.3654        | 0.2659        | 11.6313        | 3.5775         | 0.2601        | 3.8376        | 0.0000        | 18,164.1862        | 18,164.1862        | 3.4914        | 0.5504        | 18,408.1865        |
| <b>Maximum</b> | <b>283.4717</b> | <b>13.1492</b> | <b>86.2531</b> | <b>0.1822</b> | <b>11.3654</b> | <b>0.2659</b> | <b>11.6313</b> | <b>3.5775</b>  | <b>0.2601</b> | <b>3.8376</b> | <b>0.0000</b> | <b>18,164.1862</b> | <b>18,164.1862</b> | <b>3.4914</b> | <b>0.5504</b> | <b>18,408.1865</b> |

|                          | ROG         | NOx          | CO           | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.58</b> | <b>82.05</b> | <b>-2.64</b> | <b>4.77</b> | <b>30.81</b>  | <b>91.45</b> | <b>40.47</b> | <b>35.97</b>   | <b>90.97</b>  | <b>54.67</b> | <b>0.00</b> | <b>4.37</b> | <b>4.37</b> | <b>1.54</b> | <b>0.00</b> | <b>4.32</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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         | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        | 0.0000        | 155.2372        | 155.2372        | 0.1493        | 0.0000        | 158.9691        |
| Energy       | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Mobile       | 0.0000        | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> | <b>0.0000</b> | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b>  | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

**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         | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        | 0.0000        | 155.2372        | 155.2372        | 0.1493        | 0.0000        | 158.9691        |
| Energy       | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Mobile       | 0.0000        | 0.0000        | 0.0000         | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> | <b>0.0000</b> | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b>  | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/23/2022  | 5             | 23       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/29/2022 | 5             | 222      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 4/12/2022  | 5             | 35       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/14/2022 | 12/30/2022 | 5             | 35       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 69****Acres of Paving: 0****Residential Indoor: 2,116,125; Residential Outdoor: 705,375; 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 |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 150.00             | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 752.00             | 112.00             | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 6                       | 15.00              | 0.00               | 136.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 1.9687        | 0.0000        | 1.9687        | 0.2981         | 0.0000        | 0.2981        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |               | 1.2427        | 1.2427        |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>1.9687</b> | <b>1.2427</b> | <b>3.2114</b> | <b>0.2981</b>  | <b>1.1553</b> | <b>1.4533</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0412        | 1.5845        | 0.3613        | 5.6400e-003        | 0.1587        | 0.0113        | 0.1700        | 0.0435         | 0.0109        | 0.0544        |          | 617.4175        | 617.4175        | 0.0327        | 0.0980        | 647.4291        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.5000e-004   | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003   | 3.2000e-003   | 110.3993        |
| <b>Total</b> | <b>0.0872</b> | <b>1.6174</b> | <b>0.7816</b> | <b>6.7100e-003</b> | <b>0.2819</b> | <b>0.0122</b> | <b>0.2941</b> | <b>0.0762</b>  | <b>0.0116</b> | <b>0.0878</b> |          | <b>726.7718</b> | <b>726.7718</b> | <b>0.0364</b> | <b>0.1012</b> | <b>757.8285</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 0.8859        | 0.0000        | 0.8859        | 0.1341         | 0.0000        | 0.1341        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |               | 0.0616        | 0.0616        |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>0.8859</b> | <b>0.0616</b> | <b>0.9476</b> | <b>0.1341</b>  | <b>0.0616</b> | <b>0.1958</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0412        | 1.5845        | 0.3613        | 5.6400e-003        | 0.1587        | 0.0113        | 0.1700        | 0.0435         | 0.0109        | 0.0544        |          | 617.4175        | 617.4175        | 0.0327        | 0.0980        | 647.4291        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004   | 0.1240        | 0.0327         | 7.5000e-004   | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003   | 3.2000e-003   | 110.3993        |
| <b>Total</b> | <b>0.0872</b> | <b>1.6174</b> | <b>0.7816</b> | <b>6.7100e-003</b> | <b>0.2819</b> | <b>0.0122</b> | <b>0.2941</b> | <b>0.0762</b>  | <b>0.0116</b> | <b>0.0878</b> |          | <b>726.7718</b> | <b>726.7718</b> | <b>0.0364</b> | <b>0.1012</b> | <b>757.8285</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003        | 147.1991        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5605</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>145.8057</b> | <b>145.8057</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>147.1991</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003        | 147.1991        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5605</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>145.8057</b> | <b>145.8057</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>147.1991</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.2263        | 5.9649        | 1.9977         | 0.0231        | 0.7588        | 0.0554        | 0.8142        | 0.2185         | 0.0530        | 0.2715        |          | 2,483.8393        | 2,483.8393        | 0.0827        | 0.3581        | 2,592.6169        |
| Worker       | 2.3027        | 1.6466        | 21.0728        | 0.0539        | 6.1775        | 0.0406        | 6.2181        | 1.6386         | 0.0374        | 1.6759        |          | 5,482.2948        | 5,482.2948        | 0.1844        | 0.1603        | 5,534.6858        |
| <b>Total</b> | <b>2.5290</b> | <b>7.6115</b> | <b>23.0705</b> | <b>0.0770</b> | <b>6.9363</b> | <b>0.0960</b> | <b>7.0323</b> | <b>1.8570</b>  | <b>0.0904</b> | <b>1.9474</b> |          | <b>7,966.1341</b> | <b>7,966.1341</b> | <b>0.2671</b> | <b>0.5184</b> | <b>8,127.3027</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Vendor       | 0.2263        | 5.9649        | 1.9977         | 0.0231        | 0.7588        | 0.0554        | 0.8142        | 0.2185         | 0.0530        | 0.2715        |          | 2,483.8393        | 2,483.8393        | 0.0827        | 0.3581        | 2,592.6169        |
| Worker       | 2.3027        | 1.6466        | 21.0728        | 0.0539        | 6.1775        | 0.0406        | 6.2181        | 1.6386         | 0.0374        | 1.6759        |          | 5,482.2948        | 5,482.2948        | 0.1844        | 0.1603        | 5,534.6858        |
| <b>Total</b> | <b>2.5290</b> | <b>7.6115</b> | <b>23.0705</b> | <b>0.0770</b> | <b>6.9363</b> | <b>0.0960</b> | <b>7.0323</b> | <b>1.8570</b>  | <b>0.0904</b> | <b>1.9474</b> |          | <b>7,966.1341</b> | <b>7,966.1341</b> | <b>0.2671</b> | <b>0.5184</b> | <b>8,127.3027</b> |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

**3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003        | 3.2000e-003        | 110.3993        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4203</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>109.3543</b> | <b>109.3543</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>110.3993</b> |



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003        | 3.2000e-003        | 110.3993        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4203</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>109.3543</b> | <b>109.3543</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>110.3993</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 280.2354        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>280.4400</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |                    |               |                |                    |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 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       | 0.4593        | 0.3285        | 4.2034        | 0.0108        | 1.2322        | 8.0900e-003        | 1.2403        | 0.3268         | 7.4500e-003        | 0.3343        |          | 1,093.5428        | 1,093.5428        | 0.0368        | 0.0320        | 1,103.9932        |
| <b>Total</b> | <b>0.4593</b> | <b>0.3285</b> | <b>4.2034</b> | <b>0.0108</b> | <b>1.2322</b> | <b>8.0900e-003</b> | <b>1.2403</b> | <b>0.3268</b>  | <b>7.4500e-003</b> | <b>0.3343</b> |          | <b>1,093.5428</b> | <b>1,093.5428</b> | <b>0.0368</b> | <b>0.0320</b> | <b>1,103.9932</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 280.2354        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297          | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>280.2651</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |                    |               |                |                    |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 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       | 0.4593        | 0.3285        | 4.2034        | 0.0108        | 1.2322        | 8.0900e-003        | 1.2403        | 0.3268         | 7.4500e-003        | 0.3343        |          | 1,093.5428        | 1,093.5428        | 0.0368        | 0.0320        | 1,103.9932        |
| <b>Total</b> | <b>0.4593</b> | <b>0.3285</b> | <b>4.2034</b> | <b>0.0108</b> | <b>1.2322</b> | <b>8.0900e-003</b> | <b>1.2403</b> | <b>0.3268</b>  | <b>7.4500e-003</b> | <b>0.3343</b> |          | <b>1,093.5428</b> | <b>1,093.5428</b> | <b>0.0368</b> | <b>0.0320</b> | <b>1,103.9932</b> |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use            | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|---------------------|-------------------------|----------|--------|-------------|------------|
|                     | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Apartments Mid Rise | 0.00                    | 0.00     | 0.00   |             |            |
| Total               | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use            | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|---------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                     | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise | 10.80      | 7.30       | 7.50        | 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 |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

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

|                     |          |          |          |          |          |          |          |          |          |          |          |          |          |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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 | 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        |
| <b>Total</b>        |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                     | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|---------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use            | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Apartments Mid Rise | 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        |
| <b>Total</b>        |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert 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   | 2.5979 | 0.9940 | 86.2330 | 4.5500e-003 |               | 0.4773       | 0.4773     |                | 0.4773        | 0.4773      | 0.0000   | 155.2372  | 155.2372  | 0.1493 | 0.0000 | 158.9691 |
| Unmitigated | 2.5979 | 0.9940 | 86.2330 | 4.5500e-003 |               | 0.4773       | 0.4773     |                | 0.4773        | 0.4773      | 0.0000   | 155.2372  | 155.2372  | 0.1493 | 0.0000 | 158.9691 |

**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 | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Consumer Products     | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Hearth                | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Landscaping           | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        |               | 155.2372        | 155.2372        | 0.1493        |               | 158.9691        |
| <b>Total</b>          | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> |               | <b>0.4773</b> | <b>0.4773</b> |                | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Consumer Products     | 0.0000        |               |                |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |               | 0.0000          |
| Hearth                | 0.0000        | 0.0000        | 0.0000         | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Landscaping           | 2.5979        | 0.9940        | 86.2330        | 4.5500e-003        |               | 0.4773        | 0.4773        |                | 0.4773        | 0.4773        |               | 155.2372        | 155.2372        | 0.1493        |               | 158.9691        |
| <b>Total</b>          | <b>2.5979</b> | <b>0.9940</b> | <b>86.2330</b> | <b>4.5500e-003</b> |               | <b>0.4773</b> | <b>0.4773</b> |                | <b>0.4773</b> | <b>0.4773</b> | <b>0.0000</b> | <b>155.2372</b> | <b>155.2372</b> | <b>0.1493</b> | <b>0.0000</b> | <b>158.9691</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

**10.0 Stationary Equipment**



## Palmdale GPU - MFR construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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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Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

**Palmdale GPU - 2023 Operational Year Emissions**

**Los Angeles-Mojave Desert County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses                        | Size     | Metric        | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|----------|---------------|-------------|--------------------|------------|
| Single Family Housing            | 56.00    | Dwelling Unit | 18.18       | 100,800.00         | 193        |
| Apartments Mid Rise              | 1,045.00 | Dwelling Unit | 27.50       | 1,045,000.00       | 3598       |
| Strip Mall                       | 68.62    | 1000sqft      | 1.58        | 68,623.00          | 0          |
| Hotel                            | 58.00    | Room          | 1.93        | 84,216.00          | 0          |
| General Office Building          | 171.28   | 1000sqft      | 3.93        | 171,275.00         | 0          |
| Unrefrigerated Warehouse-No Rail | 502.34   | 1000sqft      | 11.53       | 502,343.00         | 0          |
| Elementary School                | 51.10    | 1000sqft      | 1.17        | 51,102.00          | 0          |
| Government Office Building       | 7.30     | 1000sqft      | 0.17        | 7,300.00           | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - Construction Modeled Separately

Off-road Equipment - Construction Modeled Separately

Trips and VMT - Construction Modeled Separately

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

Architectural Coating - Construction Modeled Separately

Vehicle Trips - See Assumptions

Woodstoves - AVAQMD and GP Policies

Area Coating - See Assumptions

Energy Use - See Assumptions. Adjusted for 100% electric development

Water And Wastewater - Water emissions not applicable to AQ output

Solid Waste - Solid waste not applicable to AQ emissions output

| Table Name              | Column Name                     | Default Value | New Value  |
|-------------------------|---------------------------------|---------------|------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior      | 250.00        | 0.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior      | 250.00        | 0.00       |
| tblArchitecturalCoating | EF_Parking                      | 250.00        | 0.00       |
| tblArchitecturalCoating | EF_Residential_Exterior         | 250.00        | 0.00       |
| tblArchitecturalCoating | EF_Residential_Interior         | 250.00        | 0.00       |
| tblAreaCoating          | Area_EF_Nonresidential_Exterior | 250           | 150        |
| tblAreaCoating          | Area_EF_Nonresidential_Interior | 250           | 50         |
| tblAreaCoating          | Area_EF_Residential_Exterior    | 250           | 150        |
| tblAreaCoating          | Area_EF_Residential_Interior    | 250           | 50         |
| tblConstructionPhase    | NumDays                         | 75.00         | 1.00       |
| tblConstructionPhase    | PhaseEndDate                    | 1/28/2028     | 10/18/2027 |
| tblEnergyUse            | NT24E                           | 3,054.10      | 4,924.61   |
| tblEnergyUse            | NT24E                           | 1.59          | 1.91       |
| tblEnergyUse            | NT24E                           | 4.62          | 4.73       |
| tblEnergyUse            | NT24E                           | 4.62          | 4.73       |
| tblEnergyUse            | NT24E                           | 2.89          | 4.08       |
| tblEnergyUse            | NT24E                           | 6,155.97      | 8,026.48   |
| tblEnergyUse            | NT24E                           | 3.23          | 3.46       |
| tblEnergyUse            | NT24E                           | 1.34          | 1.35       |
| tblEnergyUse            | NT24NG                          | 6,384.00      | 0.00       |

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

|               |                   |           |          |
|---------------|-------------------|-----------|----------|
| tblEnergyUse  | NT24NG            | 1.08      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.39      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.39      | 0.00     |
| tblEnergyUse  | NT24NG            | 4.06      | 0.00     |
| tblEnergyUse  | NT24NG            | 6,384.00  | 0.00     |
| tblEnergyUse  | NT24NG            | 0.49      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.03      | 0.00     |
| tblEnergyUse  | T24E              | 53.81     | 2,011.81 |
| tblEnergyUse  | T24E              | 1.56      | 4.26     |
| tblEnergyUse  | T24E              | 4.11      | 7.02     |
| tblEnergyUse  | T24E              | 4.11      | 7.02     |
| tblEnergyUse  | T24E              | 2.28      | 8.06     |
| tblEnergyUse  | T24E              | 93.13     | 5,691.80 |
| tblEnergyUse  | T24E              | 3.58      | 3.91     |
| tblEnergyUse  | T24E              | 0.58      | 0.82     |
| tblEnergyUse  | T24NG             | 6,682.59  | 0.00     |
| tblEnergyUse  | T24NG             | 9.23      | 0.00     |
| tblEnergyUse  | T24NG             | 9.92      | 0.00     |
| tblEnergyUse  | T24NG             | 9.92      | 0.00     |
| tblEnergyUse  | T24NG             | 19.72     | 0.00     |
| tblEnergyUse  | T24NG             | 19,108.08 | 0.00     |
| tblEnergyUse  | T24NG             | 1.14      | 0.00     |
| tblEnergyUse  | T24NG             | 0.83      | 0.00     |
| tblFireplaces | FireplaceDayYear  | 82.00     | 0.00     |
| tblFireplaces | FireplaceDayYear  | 82.00     | 0.00     |
| tblFireplaces | FireplaceHourDay  | 3.00      | 0.00     |
| tblFireplaces | FireplaceHourDay  | 3.00      | 0.00     |
| tblFireplaces | FireplaceWoodMass | 3,078.40  | 0.00     |

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

|                     |                            |          |          |
|---------------------|----------------------------|----------|----------|
| tblFireplaces       | FireplaceWoodMass          | 3,078.40 | 0.00     |
| tblFireplaces       | NumberGas                  | 574.75   | 0.00     |
| tblFireplaces       | NumberGas                  | 30.80    | 0.00     |
| tblFireplaces       | NumberNoFireplace          | 104.50   | 1,045.00 |
| tblFireplaces       | NumberNoFireplace          | 5.60     | 56.00    |
| tblFireplaces       | NumberWood                 | 365.75   | 0.00     |
| tblFireplaces       | NumberWood                 | 19.60    | 0.00     |
| tblLandUse          | Population                 | 160.00   | 193.00   |
| tblLandUse          | Population                 | 2,989.00 | 3,598.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00     | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 480.70   | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 66.43    | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 159.29   | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 6.79     | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 31.75    | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 79.13    | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 72.05    | 0.00     |
| tblSolidWaste       | SolidWasteGenerationRate   | 472.20   | 0.00     |
| tblTripsAndVMT      | WorkerTripNumber           | 224.00   | 0.00     |
| tblVehicleTrips     | DV_TP                      | 11.00    | 0.00     |
| tblVehicleTrips     | HO_TL                      | 7.50     | 12.62    |
| tblVehicleTrips     | HS_TL                      | 7.30     | 12.62    |
| tblVehicleTrips     | HW_TL                      | 10.80    | 12.62    |
| tblVehicleTrips     | PB_TP                      | 3.00     | 0.00     |
| tblVehicleTrips     | PR_TP                      | 86.00    | 100.00   |
| tblVehicleTrips     | ST_TR                      | 4.91     | 4.78     |
| tblVehicleTrips     | ST_TR                      | 2.21     | 0.00     |
| tblVehicleTrips     | ST_TR                      | 8.19     | 0.00     |

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

|                 |                     |                |      |
|-----------------|---------------------|----------------|------|
| tblVehicleTrips | ST_TR               | 9.54           | 0.00 |
| tblVehicleTrips | ST_TR               | 42.04          | 0.00 |
| tblVehicleTrips | ST_TR               | 1.74           | 0.00 |
| tblVehicleTrips | SU_TR               | 4.09           | 4.78 |
| tblVehicleTrips | SU_TR               | 0.70           | 0.00 |
| tblVehicleTrips | SU_TR               | 5.95           | 0.00 |
| tblVehicleTrips | SU_TR               | 8.55           | 0.00 |
| tblVehicleTrips | SU_TR               | 20.43          | 0.00 |
| tblVehicleTrips | SU_TR               | 1.74           | 0.00 |
| tblVehicleTrips | WD_TR               | 5.44           | 4.78 |
| tblVehicleTrips | WD_TR               | 19.52          | 0.00 |
| tblVehicleTrips | WD_TR               | 9.74           | 0.00 |
| tblVehicleTrips | WD_TR               | 22.59          | 0.00 |
| tblVehicleTrips | WD_TR               | 8.36           | 0.00 |
| tblVehicleTrips | WD_TR               | 9.44           | 0.00 |
| tblVehicleTrips | WD_TR               | 44.32          | 0.00 |
| tblVehicleTrips | WD_TR               | 1.74           | 0.00 |
| tblWater        | IndoorWaterUseRate  | 68,085,956.77  | 0.00 |
| tblWater        | IndoorWaterUseRate  | 1,481,742.47   | 0.00 |
| tblWater        | IndoorWaterUseRate  | 30,442,236.36  | 0.00 |
| tblWater        | IndoorWaterUseRate  | 1,450,215.71   | 0.00 |
| tblWater        | IndoorWaterUseRate  | 1,471,272.66   | 0.00 |
| tblWater        | IndoorWaterUseRate  | 3,648,625.43   | 0.00 |
| tblWater        | IndoorWaterUseRate  | 5,082,856.42   | 0.00 |
| tblWater        | IndoorWaterUseRate  | 116,166,125.00 | 0.00 |
| tblWater        | OutdoorWaterUseRate | 42,923,755.36  | 0.00 |
| tblWater        | OutdoorWaterUseRate | 3,810,194.92   | 0.00 |
| tblWater        | OutdoorWaterUseRate | 18,658,144.86  | 0.00 |

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

|               |                     |              |      |
|---------------|---------------------|--------------|------|
| tblWater      | OutdoorWaterUseRate | 888,841.88   | 0.00 |
| tblWater      | OutdoorWaterUseRate | 163,474.74   | 0.00 |
| tblWater      | OutdoorWaterUseRate | 2,300,220.38 | 0.00 |
| tblWater      | OutdoorWaterUseRate | 3,115,299.10 | 0.00 |
| tblWoodstoves | NumberCatalytic     | 52.25        | 0.00 |
| tblWoodstoves | NumberCatalytic     | 2.80         | 0.00 |
| tblWoodstoves | NumberNoncatalytic  | 52.25        | 0.00 |
| tblWoodstoves | NumberNoncatalytic  | 2.80         | 0.00 |
| tblWoodstoves | WoodstoveDayYear    | 82.00        | 0.00 |
| tblWoodstoves | WoodstoveDayYear    | 82.00        | 0.00 |
| tblWoodstoves | WoodstoveWoodMass   | 3,019.20     | 0.00 |
| tblWoodstoves | WoodstoveWoodMass   | 3,019.20     | 0.00 |

**2.0 Emissions Summary**

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**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    |           |           |     |     |      |
| 2027           | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          |           |           |     |     |      |
| <b>Maximum</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

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

**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    |           |           |     |     |      |
| 2027    | 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      |          |           |           |     |     |      |

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

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|----------|--|--|
|         |            | 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     | 9.0231  | 0.0943 | 8.1848 | 4.3000e-004 |               | 0.0453       | 0.0453     |                | 0.0453        | 0.0453      |          |           |           |     |     |      |



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

|              |                |               |                |               |               |               |               |               |               |               |  |  |  |  |  |
|--------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--|--|--|--|--|
| Energy       | 0.0000         | 0.0000        | 0.0000         | 0.0000        |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |  |  |  |  |  |
| Mobile       | 3.2412         | 4.1206        | 37.1579        | 0.0831        | 8.6143        | 0.0603        | 8.6745        | 2.2981        | 0.0560        | 2.3540        |  |  |  |  |  |
| Waste        |                |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |  |  |  |  |  |
| Water        |                |               |                |               |               | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |  |  |  |  |  |
| <b>Total</b> | <b>12.2644</b> | <b>4.2149</b> | <b>45.3426</b> | <b>0.0835</b> | <b>8.6143</b> | <b>0.1056</b> | <b>8.7198</b> | <b>2.2981</b> | <b>0.1013</b> | <b>2.3993</b> |  |  |  |  |  |

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

**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         | 9.0231         | 0.0943        | 8.1848         | 4.3000e-004   |               | 0.0453        | 0.0453        |                | 0.0453        | 0.0453        |          |           |           |     |     |      |
| Energy       | 0.0000         | 0.0000        | 0.0000         | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Mobile       | 3.2412         | 4.1206        | 37.1579        | 0.0831        | 8.6143        | 0.0603        | 8.6745        | 2.2981         | 0.0560        | 2.3540        |          |           |           |     |     |      |
| Waste        |                |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Water        |                |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| <b>Total</b> | <b>12.2644</b> | <b>4.2149</b> | <b>45.3426</b> | <b>0.0835</b> | <b>8.6143</b> | <b>0.1056</b> | <b>8.7198</b> | <b>2.2981</b>  | <b>0.1013</b> | <b>2.3993</b> |          |           |           |     |     |      |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Architectural Coating | Architectural Coating | 10/16/2027 | 10/18/2027 | 5             | 1        |                   |

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

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**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: 2,320,245; Residential Outdoor: 773,415; Non-Residential Indoor: 1,327,289; Non-Residential Outdoor: 442,430; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors        | 0      | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 0                       | 0.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

**3.2 Architectural Coating - 2027**

**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 | 0.0000        |               |               |               |               | 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        |          |           |           |     |     |      |
| <b>Total</b>    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

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

**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        |          |           |           |     |     |      |
| Vendor       | 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        |          |           |           |     |     |      |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000        |               |               |               |               | 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        |          |           |           |     |     |      |
| <b>Total</b>    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

**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        |          |           |           |     |     |      |
| Vendor       | 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        |          |           |           |     |     |      |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

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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   | 3.2412  | 4.1206 | 37.1579 | 0.0831 | 8.6143        | 0.0603       | 8.6745     | 2.2981         | 0.0560        | 2.3540      |          |           |           |     |     |      |
| Unmitigated | 3.2412  | 4.1206 | 37.1579 | 0.0831 | 8.6143        | 0.0603       | 8.6745     | 2.2981         | 0.0560        | 2.3540      |          |           |           |     |     |      |

**4.2 Trip Summary Information**

| Land Use                         | Average Daily Trip Rate |                 |                 | Unmitigated       | Mitigated         |
|----------------------------------|-------------------------|-----------------|-----------------|-------------------|-------------------|
|                                  | Weekday                 | Saturday        | Sunday          | Annual VMT        | Annual VMT        |
| Apartments Mid Rise              | 4,991.76                | 4,991.76        | 4991.76         | 22,930,530        | 22,930,530        |
| Elementary School                | 0.00                    | 0.00            | 0.00            |                   |                   |
| General Office Building          | 0.00                    | 0.00            | 0.00            |                   |                   |
| Government Office Building       | 0.00                    | 0.00            | 0.00            |                   |                   |
| Hotel                            | 0.00                    | 0.00            | 0.00            |                   |                   |
| Single Family Housing            | 0.00                    | 0.00            | 0.00            |                   |                   |
| Strip Mall                       | 0.00                    | 0.00            | 0.00            |                   |                   |
| Unrefrigerated Warehouse-No Rail | 0.00                    | 0.00            | 0.00            |                   |                   |
| <b>Total</b>                     | <b>4,991.76</b>         | <b>4,991.76</b> | <b>4,991.76</b> | <b>22,930,530</b> | <b>22,930,530</b> |

**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**

| Land Use                    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise         | 12.62      | 12.62      | 12.62       | 40.20      | 19.20      | 40.60       | 100            | 0        | 0       |
| Elementary School           | 9.50       | 7.30       | 7.30        | 65.00      | 30.00      | 5.00        | 63             | 25       | 12      |
| General Office Building     | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |
| Government Office Building  | 9.50       | 7.30       | 7.30        | 33.00      | 62.00      | 5.00        | 50             | 34       | 16      |
| Hotel                       | 9.50       | 7.30       | 7.30        | 19.40      | 61.60      | 19.00       | 58             | 38       | 4       |
| Single Family Housing       | 10.80      | 7.30       | 7.50        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Strip Mall                  | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |
| Unrefrigerated Warehouse-No | 9.50       | 7.30       | 7.30        | 59.00      | 0.00       | 41.00       | 92             | 5        | 3       |

**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 |
| Elementary School                   | 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 |
| General Office Building             | 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 |
| Government Office Building          | 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                               | 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 |
| Single Family Housing               | 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 |
| Unrefrigerated Warehouse-No<br>Rail | 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**

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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      |          |           |           |     |     |      |  |
| Electricity Unmitigated |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          |           |           |     |     |      |  |
| NaturalGas Mitigated    | 0.0000  | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          |           |           |     |     |      |  |
| NaturalGas Unmitigated  | 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****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              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Elementary School                | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| General Office Building          | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Government Office Building       | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hotel                            | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Single Family Housing            | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Strip Mall                       | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

**Mitigated**

|                                  | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------|-----------|-----|-----|------|
| Land Use                         | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr    |           |           |     |     |      |
| Apartments Mid Rise              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Elementary School                | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| General Office Building          | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Government Office Building       | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hotel                            | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Single Family Housing            | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Strip Mall                       | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| <b>Total</b>                     |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

## Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert 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          | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 8.02336e+006    |         |           |     |     |      |
| Elementary School                | 447654          |         |           |     |     |      |
| General Office Building          | 2.65819e+006    |         |           |     |     |      |
| Government Office Building       | 113296          |         |           |     |     |      |
| Hotel                            | 1.2026e+006     |         |           |     |     |      |
| Single Family Housing            | 858319          |         |           |     |     |      |
| Strip Mall                       | 935331          |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 2.04956e+006    |         |           |     |     |      |
| <b>Total</b>                     |                 |         |           |     |     |      |

## Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

|                                  | Electricity Use |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|-----------------|---------|-----------|-----|-----|------|
| Land Use                         | kWh/yr          | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 8.02336e+006    |         |           |     |     |      |
| Elementary School                | 447654          |         |           |     |     |      |
| General Office Building          | 2.65819e+006    |         |           |     |     |      |
| Government Office Building       | 113296          |         |           |     |     |      |
| Hotel                            | 1.2026e+006     |         |           |     |     |      |
| Single Family Housing            | 858319          |         |           |     |     |      |
| Strip Mall                       | 935331          |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 2.04956e+006    |         |           |     |     |      |
| <b>Total</b>                     |                 |         |           |     |     |      |

**6.0 Area Detail****6.1 Mitigation Measures Area**

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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   | 9.0231  | 0.0943 | 8.1848 | 4.3000e-004 |               | 0.0453       | 0.0453     |                | 0.0453        | 0.0453      |          |           |           |     |     |      |
| Unmitigated | 9.0231  | 0.0943 | 8.1848 | 4.3000e-004 |               | 0.0453       | 0.0453     |                | 0.0453        | 0.0453      |          |           |           |     |     |      |

**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 | 0.8453        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Consumer Products     | 7.9307        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Landscaping           | 0.2471        | 0.0943        | 8.1848        | 4.3000e-004        |               | 0.0453        | 0.0453        |                | 0.0453        | 0.0453        |          |           |           |     |     |      |
| <b>Total</b>          | <b>9.0231</b> | <b>0.0943</b> | <b>8.1848</b> | <b>4.3000e-004</b> |               | <b>0.0453</b> | <b>0.0453</b> |                | <b>0.0453</b> | <b>0.0453</b> |          |           |           |     |     |      |

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

**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 | 0.8453        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Consumer Products     | 7.9307        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Landscaping           | 0.2471        | 0.0943        | 8.1848        | 4.3000e-004        |               | 0.0453        | 0.0453        |                | 0.0453        | 0.0453        |          |           |           |     |     |      |
| <b>Total</b>          | <b>9.0231</b> | <b>0.0943</b> | <b>8.1848</b> | <b>4.3000e-004</b> |               | <b>0.0453</b> | <b>0.0453</b> |                | <b>0.0453</b> | <b>0.0453</b> |          |           |           |     |     |      |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|           | Total CO2 | CH4   | N2O | CO2e |  |
|-----------|-----------|-------|-----|------|--|
| Category  | tons/yr   | MT/yr |     |      |  |
| Mitigated |           |       |     |      |  |

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

|             |  |  |  |  |  |
|-------------|--|--|--|--|--|
| Unmitigated |  |  |  |  |  |
|-------------|--|--|--|--|--|

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert 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               | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 0 / 0              |         |           |     |     |      |
| Elementary School                | 0 / 0              |         |           |     |     |      |
| General Office Building          | 0 / 0              |         |           |     |     |      |
| Government Office Building       | 0 / 0              |         |           |     |     |      |
| Hotel                            | 0 / 0              |         |           |     |     |      |
| Single Family Housing            | 0 / 0              |         |           |     |     |      |
| Strip Mall                       | 0 / 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         |           |     |     |      |
| <b>Total</b>                     |                    |         |           |     |     |      |



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

**Mitigated**

|                                  | Indoor/Outdoor Use |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|--------------------|---------|-----------|-----|-----|------|
| Land Use                         | Mgal               | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 0 / 0              |         |           |     |     |      |
| Elementary School                | 0 / 0              |         |           |     |     |      |
| General Office Building          | 0 / 0              |         |           |     |     |      |
| Government Office Building       | 0 / 0              |         |           |     |     |      |
| Hotel                            | 0 / 0              |         |           |     |     |      |
| Single Family Housing            | 0 / 0              |         |           |     |     |      |
| Strip Mall                       | 0 / 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         |           |     |     |      |
| <b>Total</b>                     |                    |         |           |     |     |      |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

|             |         | Total<br>CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------------|-----|-----|------|
|             | tons/yr | MT/yr        |     |     |      |
| Mitigated   |         |              |     |     |      |
| Unmitigated |         |              |     |     |      |

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert 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           | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 0              |         |           |     |     |      |
| Elementary School                | 0              |         |           |     |     |      |
| General Office Building          | 0              |         |           |     |     |      |
| Government Office Building       | 0              |         |           |     |     |      |
| Hotel                            | 0              |         |           |     |     |      |
| Single Family Housing            | 0              |         |           |     |     |      |
| Strip Mall                       | 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0              |         |           |     |     |      |
| <b>Total</b>                     |                |         |           |     |     |      |

Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

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

**Mitigated**

|                                  | Waste Disposed |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|----------------|---------|-----------|-----|-----|------|
| Land Use                         | tons           | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 0              |         |           |     |     |      |
| Elementary School                | 0              |         |           |     |     |      |
| General Office Building          | 0              |         |           |     |     |      |
| Government Office Building       | 0              |         |           |     |     |      |
| Hotel                            | 0              |         |           |     |     |      |
| Single Family Housing            | 0              |         |           |     |     |      |
| Strip Mall                       | 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0              |         |           |     |     |      |
| <b>Total</b>                     |                |         |           |     |     |      |

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

## Palmdale GPU - 2023 Operational Year Emissions - Los Angeles-Mojave Desert County, Annual

**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**

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## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale General Plan - Buildout Year Operational Emissions****Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses                        | Size      | Metric        | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|-----------|---------------|-------------|--------------------|------------|
| Single Family Housing            | 1,115.00  | Dwelling Unit | 362.01      | 2,007,000.00       | 3838       |
| Apartments Mid Rise              | 20,885.00 | Dwelling Unit | 549.61      | 20,885,000.00      | 71918      |
| Strip Mall                       | 1,372.00  | 1000sqft      | 31.50       | 1,372,000.00       | 0          |
| Hotel                            | 174.00    | Room          | 5.80        | 252,000.00         | 0          |
| General Office Building          | 3,425.00  | 1000sqft      | 78.63       | 3,425,000.00       | 0          |
| Unrefrigerated Warehouse-No Rail | 10,047.00 | 1000sqft      | 230.65      | 10,047,000.00      | 0          |
| Elementary School                | 1,022.00  | 1000sqft      | 23.46       | 1,022,000.00       | 0          |
| Government Office Building       | 146.00    | 1000sqft      | 3.35        | 146,000.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2045  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - construction modeled separately

Off-road Equipment - construction modeled separately

Trips and VMT - construction modeled separately

## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

Architectural Coating - construction modeled separately

Vehicle Trips - See Assumptions

Woodstoves - No wood burning hearts or natural gas fireplaces. AVAQMD and GP Policys

Area Coating - AVAQMD regulations

Energy Use - 100% Electric development

Water And Wastewater - See Assumptions

Solid Waste - See Assumptins

| Table Name              | Column Name                     | Default Value | New Value |
|-------------------------|---------------------------------|---------------|-----------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior      | 250.00        | 0.00      |
| tblArchitecturalCoating | EF_Nonresidential_Interior      | 250.00        | 0.00      |
| tblArchitecturalCoating | EF_Parking                      | 250.00        | 0.00      |
| tblArchitecturalCoating | EF_Residential_Exterior         | 250.00        | 0.00      |
| tblArchitecturalCoating | EF_Residential_Interior         | 250.00        | 0.00      |
| tblAreaCoating          | Area_EF_Nonresidential_Exterior | 250           | 150       |
| tblAreaCoating          | Area_EF_Nonresidential_Interior | 250           | 50        |
| tblAreaCoating          | Area_EF_Residential_Exterior    | 250           | 150       |
| tblAreaCoating          | Area_EF_Residential_Interior    | 250           | 50        |
| tblConstructionPhase    | NumDays                         | 11,000.00     | 1.00      |
| tblConstructionPhase    | PhaseEndDate                    | 3/12/2821     | 1/15/2779 |
| tblEnergyUse            | NT24E                           | 3,054.10      | 4,924.61  |
| tblEnergyUse            | NT24E                           | 1.59          | 1.19      |
| tblEnergyUse            | NT24E                           | 4.62          | 4.73      |
| tblEnergyUse            | NT24E                           | 4.62          | 4.73      |
| tblEnergyUse            | NT24E                           | 2.89          | 4.08      |
| tblEnergyUse            | NT24E                           | 6,155.97      | 8,026.48  |
| tblEnergyUse            | NT24E                           | 3.23          | 3.46      |
| tblEnergyUse            | NT24E                           | 1.34          | 1.35      |
| tblEnergyUse            | NT24NG                          | 6,384.00      | 0.00      |

## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

|               |                   |           |          |
|---------------|-------------------|-----------|----------|
| tblEnergyUse  | NT24NG            | 1.08      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.39      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.39      | 0.00     |
| tblEnergyUse  | NT24NG            | 4.06      | 0.00     |
| tblEnergyUse  | NT24NG            | 6,384.00  | 0.00     |
| tblEnergyUse  | NT24NG            | 0.49      | 0.00     |
| tblEnergyUse  | NT24NG            | 0.03      | 0.00     |
| tblEnergyUse  | T24E              | 53.81     | 2,011.81 |
| tblEnergyUse  | T24E              | 1.56      | 4.26     |
| tblEnergyUse  | T24E              | 4.11      | 7.02     |
| tblEnergyUse  | T24E              | 4.11      | 7.02     |
| tblEnergyUse  | T24E              | 2.28      | 8.06     |
| tblEnergyUse  | T24E              | 93.13     | 5,691.80 |
| tblEnergyUse  | T24E              | 3.58      | 3.91     |
| tblEnergyUse  | T24E              | 0.58      | 0.82     |
| tblEnergyUse  | T24NG             | 6,682.59  | 0.00     |
| tblEnergyUse  | T24NG             | 9.23      | 0.00     |
| tblEnergyUse  | T24NG             | 9.92      | 0.00     |
| tblEnergyUse  | T24NG             | 9.92      | 0.00     |
| tblEnergyUse  | T24NG             | 19.72     | 0.00     |
| tblEnergyUse  | T24NG             | 19,108.08 | 0.00     |
| tblEnergyUse  | T24NG             | 1.14      | 0.00     |
| tblEnergyUse  | T24NG             | 0.83      | 0.00     |
| tblFireplaces | FireplaceDayYear  | 82.00     | 0.00     |
| tblFireplaces | FireplaceDayYear  | 82.00     | 0.00     |
| tblFireplaces | FireplaceHourDay  | 3.00      | 0.00     |
| tblFireplaces | FireplaceHourDay  | 3.00      | 0.00     |
| tblFireplaces | FireplaceWoodMass | 3,078.40  | 0.00     |



## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

|                     |                            |            |            |
|---------------------|----------------------------|------------|------------|
| tblFireplaces       | FireplaceWoodMass          | 3,078.40   | 0.00       |
| tblFireplaces       | NumberGas                  | 11,486.75  | 0.00       |
| tblFireplaces       | NumberGas                  | 613.25     | 0.00       |
| tblFireplaces       | NumberNoFireplace          | 2,088.50   | 20,885.00  |
| tblFireplaces       | NumberNoFireplace          | 111.50     | 1,115.00   |
| tblFireplaces       | NumberWood                 | 7,309.75   | 0.00       |
| tblFireplaces       | NumberWood                 | 390.25     | 0.00       |
| tblLandUse          | LandUseSquareFeet          | 252,648.00 | 252,000.00 |
| tblLandUse          | Population                 | 3,189.00   | 3,838.00   |
| tblLandUse          | Population                 | 59,731.00  | 71,918.00  |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00       | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 9,607.10   | 43,662.00  |
| tblSolidWaste       | SolidWasteGenerationRate   | 1,328.60   | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 3,185.25   | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 135.78     | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 95.27      | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 1,573.58   | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 1,440.60   | 0.00       |
| tblSolidWaste       | SolidWasteGenerationRate   | 9,444.18   | 0.00       |
| tblTripsAndVMT      | WorkerTripNumber           | 4,355.00   | 0.00       |
| tblVehicleTrips     | DV_TP                      | 11.00      | 0.00       |
| tblVehicleTrips     | HO_TL                      | 7.50       | 12.62      |
| tblVehicleTrips     | HS_TL                      | 7.30       | 12.62      |
| tblVehicleTrips     | HW_TL                      | 10.80      | 12.62      |
| tblVehicleTrips     | PB_TP                      | 3.00       | 0.00       |
| tblVehicleTrips     | PR_TP                      | 86.00      | 100.00     |
| tblVehicleTrips     | ST_TR                      | 4.91       | 4.78       |
| tblVehicleTrips     | ST_TR                      | 2.21       | 0.00       |

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

|                 |                                       |                  |                  |
|-----------------|---------------------------------------|------------------|------------------|
| tblVehicleTrips | ST_TR                                 | 8.19             | 0.00             |
| tblVehicleTrips | ST_TR                                 | 9.54             | 0.00             |
| tblVehicleTrips | ST_TR                                 | 42.04            | 0.00             |
| tblVehicleTrips | ST_TR                                 | 1.74             | 0.00             |
| tblVehicleTrips | SU_TR                                 | 4.09             | 4.78             |
| tblVehicleTrips | SU_TR                                 | 0.70             | 0.00             |
| tblVehicleTrips | SU_TR                                 | 5.95             | 0.00             |
| tblVehicleTrips | SU_TR                                 | 8.55             | 0.00             |
| tblVehicleTrips | SU_TR                                 | 20.43            | 0.00             |
| tblVehicleTrips | SU_TR                                 | 1.74             | 0.00             |
| tblVehicleTrips | WD_TR                                 | 5.44             | 4.78             |
| tblVehicleTrips | WD_TR                                 | 19.52            | 0.00             |
| tblVehicleTrips | WD_TR                                 | 9.74             | 0.00             |
| tblVehicleTrips | WD_TR                                 | 22.59            | 0.00             |
| tblVehicleTrips | WD_TR                                 | 8.36             | 0.00             |
| tblVehicleTrips | WD_TR                                 | 9.44             | 0.00             |
| tblVehicleTrips | WD_TR                                 | 44.32            | 0.00             |
| tblVehicleTrips | WD_TR                                 | 1.74             | 0.00             |
| tblWater        | AerobicPercent                        | 87.46            | 97.54            |
| tblWater        | AnaerobicandFacultativeLagoonsPercent | 2.21             | 2.46             |
| tblWater        | IndoorWaterUseRate                    | 1,360,741,825.10 | 1,739,319,900.00 |
| tblWater        | IndoorWaterUseRate                    | 29,634,849.39    | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 608,738,086.88   | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 29,004,314.14    | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 4,413,817.98     | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 72,646,738.57    | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 101,627,499.48   | 0.00             |
| tblWater        | IndoorWaterUseRate                    | 2,323,368,750.00 | 0.00             |

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

|               |                     |                |                |
|---------------|---------------------|----------------|----------------|
| tblWater      | OutdoorWaterUseRate | 857,858,976.70 | 170,818,662.00 |
| tblWater      | OutdoorWaterUseRate | 76,203,898.43  | 0.00           |
| tblWater      | OutdoorWaterUseRate | 373,097,537.12 | 0.00           |
| tblWater      | OutdoorWaterUseRate | 17,776,837.70  | 0.00           |
| tblWater      | OutdoorWaterUseRate | 490,424.22     | 0.00           |
| tblWater      | OutdoorWaterUseRate | 45,799,030.84  | 0.00           |
| tblWater      | OutdoorWaterUseRate | 62,287,822.26  | 0.00           |
| tblWater      | SepticTankPercent   | 10.33          | 0.00           |
| tblWoodstoves | NumberCatalytic     | 1,044.25       | 0.00           |
| tblWoodstoves | NumberCatalytic     | 55.75          | 0.00           |
| tblWoodstoves | NumberNoncatalytic  | 1,044.25       | 0.00           |
| tblWoodstoves | NumberNoncatalytic  | 55.75          | 0.00           |
| tblWoodstoves | WoodstoveDayYear    | 82.00          | 0.00           |
| tblWoodstoves | WoodstoveDayYear    | 82.00          | 0.00           |
| tblWoodstoves | WoodstoveWoodMass   | 3,019.20       | 0.00           |
| tblWoodstoves | WoodstoveWoodMass   | 3,019.20       | 0.00           |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

|      | ROG     | NOx    | CO     | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------|---------|--------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|------|
| Year | tons/yr |        |        |        |               |              |            |                |               |             | MT/yr    |           |           |     |     |      |
| 2779 | 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**

|         |        |        |        |        |        |        |        |        |        |        |  |  |  |  |  |  |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|--|--|--|--|--|
| Maximum | 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    |           |           |     |     |      |
| 2779    | 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      |          |           |           |     |     |      |

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

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

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**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         | 174.1984        | 1.8786         | 162.7827        | 8.6400e-003   |                 | 0.9064        | 0.9064          |                | 0.9064        | 0.9064         |          |           |           |     |     |      |
| Energy       | 0.0000          | 0.0000         | 0.0000          | 0.0000        |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| Mobile       | 52.7692         | 52.7040        | 551.9966        | 1.2188        | 172.3052        | 0.5827        | 172.8878        | 45.9942        | 0.5443        | 46.5385        |          |           |           |     |     |      |
| Waste        |                 |                |                 |               |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| Water        |                 |                |                 |               |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| <b>Total</b> | <b>226.9676</b> | <b>54.5826</b> | <b>714.7793</b> | <b>1.2275</b> | <b>172.3052</b> | <b>1.4891</b> | <b>173.7942</b> | <b>45.9942</b> | <b>1.4507</b> | <b>47.4449</b> |          |           |           |     |     |      |

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

**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         | 174.1984        | 1.8786         | 162.7827        | 8.6400e-003   |                 | 0.9064        | 0.9064          |                | 0.9064        | 0.9064         |          |           |           |     |     |      |
| Energy       | 0.0000          | 0.0000         | 0.0000          | 0.0000        |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| Mobile       | 52.7692         | 52.7040        | 551.9966        | 1.2188        | 172.3052        | 0.5827        | 172.8878        | 45.9942        | 0.5443        | 46.5385        |          |           |           |     |     |      |
| Waste        |                 |                |                 |               |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| Water        |                 |                |                 |               |                 | 0.0000        | 0.0000          |                | 0.0000        | 0.0000         |          |           |           |     |     |      |
| <b>Total</b> | <b>226.9676</b> | <b>54.5826</b> | <b>714.7793</b> | <b>1.2275</b> | <b>172.3052</b> | <b>1.4891</b> | <b>173.7942</b> | <b>45.9942</b> | <b>1.4507</b> | <b>47.4449</b> |          |           |           |     |     |      |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1            | Architectural Coating | Architectural Coating | 1/13/2779  | 1/15/2779 | 5             | 1        |                   |

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

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

**Acres of Paving: 0**

**Residential Indoor: 46,356,300; Residential Outdoor: 15,452,100; Non-Residential Indoor: 24,396,000; Non-Residential Outdoor: 8,132,000; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors        | 0      | 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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 0                       | 0.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

**3.2 Architectural Coating - 2779**

**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 | 0.0000        |               |               |               |               | 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        |          |           |           |     |     |      |
| <b>Total</b>    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |

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**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        |          |           |           |     |     |      |
| Vendor       |         |     |    |     | 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        |          |           |           |     |     |      |
| <b>Total</b> |         |     |    |     | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000        |               |               |               |               | 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        |          |           |           |     |     |      |  |
| <b>Total</b>    | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |  |

**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        |          |           |           |     |     |      |  |
| Vendor       |         |     |    |     | 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        |          |           |           |     |     |      |  |
| <b>Total</b> |         |     |    |     | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |  |

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**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   | 52.7692 | 52.7040 | 551.9966 | 1.2188 | 172.3052      | 0.5827       | 172.8878   | 45.9942        | 0.5443        | 46.5385     |          |           |           |     |     |      |
| Unmitigated | 52.7692 | 52.7040 | 551.9966 | 1.2188 | 172.3052      | 0.5827       | 172.8878   | 45.9942        | 0.5443        | 46.5385     |          |           |           |     |     |      |

**4.2 Trip Summary Information**

| Land Use                         | Average Daily Trip Rate |                  |                  | Unmitigated        | Mitigated          |
|----------------------------------|-------------------------|------------------|------------------|--------------------|--------------------|
|                                  | Weekday                 | Saturday         | Sunday           | Annual VMT         | Annual VMT         |
| Apartments Mid Rise              | 99,746.76               | 99,746.76        | 99,746.76        | 458,204,696        | 458,204,696        |
| Elementary School                | 0.00                    | 0.00             | 0.00             |                    |                    |
| General Office Building          | 0.00                    | 0.00             | 0.00             |                    |                    |
| Government Office Building       | 0.00                    | 0.00             | 0.00             |                    |                    |
| Hotel                            | 0.00                    | 0.00             | 0.00             |                    |                    |
| Single Family Housing            | 0.00                    | 0.00             | 0.00             |                    |                    |
| Strip Mall                       | 0.00                    | 0.00             | 0.00             |                    |                    |
| Unrefrigerated Warehouse-No Rail | 0.00                    | 0.00             | 0.00             |                    |                    |
| <b>Total</b>                     | <b>99,746.76</b>        | <b>99,746.76</b> | <b>99,746.76</b> | <b>458,204,696</b> | <b>458,204,696</b> |

**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**

| Land Use                    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Apartments Mid Rise         | 12.62      | 12.62      | 12.62       | 40.20      | 19.20      | 40.60       | 100            | 0        | 0       |
| Elementary School           | 9.50       | 7.30       | 7.30        | 65.00      | 30.00      | 5.00        | 63             | 25       | 12      |
| General Office Building     | 9.50       | 7.30       | 7.30        | 33.00      | 48.00      | 19.00       | 77             | 19       | 4       |
| Government Office Building  | 9.50       | 7.30       | 7.30        | 33.00      | 62.00      | 5.00        | 50             | 34       | 16      |
| Hotel                       | 9.50       | 7.30       | 7.30        | 19.40      | 61.60      | 19.00       | 58             | 38       | 4       |
| Single Family Housing       | 10.80      | 7.30       | 7.50        | 40.20      | 19.20      | 40.60       | 86             | 11       | 3       |
| Strip Mall                  | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |
| Unrefrigerated Warehouse-No | 9.50       | 7.30       | 7.30        | 59.00      | 0.00       | 41.00       | 92             | 5        | 3       |

**4.4 Fleet Mix**

| Land Use                            | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apartments Mid Rise                 | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Elementary School                   | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| General Office Building             | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Government Office Building          | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Hotel                               | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Single Family Housing               | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Strip Mall                          | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |
| Unrefrigerated Warehouse-No<br>Rail | 0.513803 | 0.071730 | 0.195358 | 0.129140 | 0.026589 | 0.008109 | 0.012209 | 0.007596 | 0.000946 | 0.000535 | 0.029664 | 0.000785 | 0.003536 |

**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      |          |           |           |     |     |      |
| Electricity Unmitigated |         |        |        |        |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          |           |           |     |     |      |
| NaturalGas Mitigated    | 0.0000  | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          |           |           |     |     |      |
| NaturalGas Unmitigated  | 0.0000  | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          |           |           |     |     |      |

## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert 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              | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Elementary School                | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| General Office Building          | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Government Office Building       | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Hotel                            | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Single Family Housing            | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Strip Mall                       | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Unrefrigerated Warehouse-No Rail | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| <b>Total</b>                     |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |  |

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

**Mitigated**

|                                  | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |  |
|----------------------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------|-----------|-----|-----|------|--|
| Land Use                         | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr    |           |           |     |     |      |  |
| Apartments Mid Rise              | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Elementary School                | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| General Office Building          | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Government Office Building       | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Hotel                            | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Single Family Housing            | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Strip Mall                       | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| Unrefrigerated Warehouse-No Rail | 0               | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |  |
| <b>Total</b>                     |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          |           |           |     |     |      |  |

## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert 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          | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 1.60352e+008    |         |           |     |     |      |
| Elementary School                | 8.21688e+006    |         |           |     |     |      |
| General Office Building          | 5.3156e+007     |         |           |     |     |      |
| Government Office Building       | 2.26592e+006    |         |           |     |     |      |
| Hotel                            | 3.59856e+006    |         |           |     |     |      |
| Single Family Housing            | 1.70897e+007    |         |           |     |     |      |
| Strip Mall                       | 1.87004e+007    |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 4.09918e+007    |         |           |     |     |      |
| <b>Total</b>                     |                 |         |           |     |     |      |

Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

**Mitigated**

|                                  | Electricity Use |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|-----------------|---------|-----------|-----|-----|------|
| Land Use                         | kWh/yr          | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 1.60352e+008    |         |           |     |     |      |
| Elementary School                | 8.21688e+006    |         |           |     |     |      |
| General Office Building          | 5.3156e+007     |         |           |     |     |      |
| Government Office Building       | 2.26592e+006    |         |           |     |     |      |
| Hotel                            | 3.59856e+006    |         |           |     |     |      |
| Single Family Housing            | 1.70897e+007    |         |           |     |     |      |
| Strip Mall                       | 1.87004e+007    |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 4.09918e+007    |         |           |     |     |      |
| <b>Total</b>                     |                 |         |           |     |     |      |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



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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   | 174.1984 | 1.8786 | 162.7827 | 8.6400e-003 |               | 0.9064       | 0.9064     |                | 0.9064        | 0.9064      |          |           |           |     |     |      |
| Unmitigated | 174.1984 | 1.8786 | 162.7827 | 8.6400e-003 |               | 0.9064       | 0.9064     |                | 0.9064        | 0.9064      |          |           |           |     |     |      |

**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 | 16.3969         |               |                 |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Consumer Products     | 152.9238        |               |                 |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hearth                | 0.0000          | 0.0000        | 0.0000          | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Landscaping           | 4.8778          | 1.8786        | 162.7827        | 8.6400e-003        |               | 0.9064        | 0.9064        |                | 0.9064        | 0.9064        |          |           |           |     |     |      |
| <b>Total</b>          | <b>174.1984</b> | <b>1.8786</b> | <b>162.7827</b> | <b>8.6400e-003</b> |               | <b>0.9064</b> | <b>0.9064</b> |                | <b>0.9064</b> | <b>0.9064</b> |          |           |           |     |     |      |

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

**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 | 16.3969         |               |                 |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Consumer Products     | 152.9238        |               |                 |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Hearth                | 0.0000          | 0.0000        | 0.0000          | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |           |           |     |     |      |
| Landscaping           | 4.8778          | 1.8786        | 162.7827        | 8.6400e-003        |               | 0.9064        | 0.9064        |                | 0.9064        | 0.9064        |          |           |           |     |     |      |
| <b>Total</b>          | <b>174.1984</b> | <b>1.8786</b> | <b>162.7827</b> | <b>8.6400e-003</b> |               | <b>0.9064</b> | <b>0.9064</b> |                | <b>0.9064</b> | <b>0.9064</b> |          |           |           |     |     |      |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|           | Total CO2 | CH4   | N2O | CO2e |  |
|-----------|-----------|-------|-----|------|--|
| Category  | tons/yr   | MT/yr |     |      |  |
| Mitigated |           |       |     |      |  |

Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

|             |  |  |  |  |  |
|-------------|--|--|--|--|--|
| Unmitigated |  |  |  |  |  |
|-------------|--|--|--|--|--|

Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert 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               | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 1739.32 / 170.819  |         |           |     |     |      |
| Elementary School                | 0 / 0              |         |           |     |     |      |
| General Office Building          | 0 / 0              |         |           |     |     |      |
| Government Office Building       | 0 / 0              |         |           |     |     |      |
| Hotel                            | 0 / 0              |         |           |     |     |      |
| Single Family Housing            | 0 / 0              |         |           |     |     |      |
| Strip Mall                       | 0 / 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         |           |     |     |      |
| <b>Total</b>                     |                    |         |           |     |     |      |

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

**Mitigated**

|                                  | Indoor/Outdoor Use |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|--------------------|---------|-----------|-----|-----|------|
| Land Use                         | Mgal               | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 1739.32 / 170.819  |         |           |     |     |      |
| Elementary School                | 0 / 0              |         |           |     |     |      |
| General Office Building          | 0 / 0              |         |           |     |     |      |
| Government Office Building       | 0 / 0              |         |           |     |     |      |
| Hotel                            | 0 / 0              |         |           |     |     |      |
| Single Family Housing            | 0 / 0              |         |           |     |     |      |
| Strip Mall                       | 0 / 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0 / 0              |         |           |     |     |      |
| <b>Total</b>                     |                    |         |           |     |     |      |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

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

|             |         | Total<br>CO2 | CH4 | N2O | CO2e |
|-------------|---------|--------------|-----|-----|------|
|             | tons/yr | MT/yr        |     |     |      |
| Mitigated   |         |              |     |     |      |
| Unmitigated |         |              |     |     |      |

Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert 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           | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 43662          |         |           |     |     |      |
| Elementary School                | 0              |         |           |     |     |      |
| General Office Building          | 0              |         |           |     |     |      |
| Government Office Building       | 0              |         |           |     |     |      |
| Hotel                            | 0              |         |           |     |     |      |
| Single Family Housing            | 0              |         |           |     |     |      |
| Strip Mall                       | 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0              |         |           |     |     |      |
| <b>Total</b>                     |                |         |           |     |     |      |

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

**Mitigated**

|                                  | Waste Disposed |         | Total CO2 | CH4 | N2O | CO2e |
|----------------------------------|----------------|---------|-----------|-----|-----|------|
| Land Use                         | tons           | tons/yr | MT/yr     |     |     |      |
| Apartments Mid Rise              | 43662          |         |           |     |     |      |
| Elementary School                | 0              |         |           |     |     |      |
| General Office Building          | 0              |         |           |     |     |      |
| Government Office Building       | 0              |         |           |     |     |      |
| Hotel                            | 0              |         |           |     |     |      |
| Single Family Housing            | 0              |         |           |     |     |      |
| Strip Mall                       | 0              |         |           |     |     |      |
| Unrefrigerated Warehouse-No Rail | 0              |         |           |     |     |      |
| <b>Total</b>                     |                |         |           |     |     |      |

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**



## Palmdale General Plan - Buildout Year Operational Emissions - Los Angeles-Mojave Desert County, Annual

**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**

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## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Retail/Restaurant Construction Only****Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses  | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------|-------|----------|-------------|--------------------|------------|
| Strip Mall | 68.62 | 1000sqft | 1.58        | 68,623.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 6.26         | 0.00         |
| tblEnergyUse            | NT24E                        | 3.23         | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.49         | 0.00         |
| tblEnergyUse            | T24E                         | 3.58         | 0.00         |
| tblEnergyUse            | T24NG                        | 1.14         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblLandUse              | LandUseSquareFeet            | 68,620.00    | 68,623.00    |
| tblSolidWaste           | SolidWasteGenerationRate     | 72.05        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 42.04        | 0.00         |
| tblVehicleTrips         | SU_TR                        | 20.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 44.32        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 5,082,856.42 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,115,299.10 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

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

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

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

| Year           | tons/yr       |               |               |                    |               |               |               |               |               |               | MT/yr         |                 |                 |               |                    |                 |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| 2022           | 0.4377        | 1.5835        | 1.5790        | 3.0700e-003        | 0.0776        | 0.0718        | 0.1493        | 0.0200        | 0.0689        | 0.0889        | 0.0000        | 261.5421        | 261.5421        | 0.0419        | 5.2000e-003        | 264.1382        |
| <b>Maximum</b> | <b>0.4377</b> | <b>1.5835</b> | <b>1.5790</b> | <b>3.0700e-003</b> | <b>0.0776</b> | <b>0.0718</b> | <b>0.1493</b> | <b>0.0200</b> | <b>0.0689</b> | <b>0.0889</b> | <b>0.0000</b> | <b>261.5421</b> | <b>261.5421</b> | <b>0.0419</b> | <b>5.2000e-003</b> | <b>264.1382</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.2623        | 0.1521        | 0.7804        | 1.6400e-003        | 0.0512        | 2.7100e-003        | 0.0539        | 0.0135         | 2.6700e-003        | 0.0161        | 0.0000        | 148.3832        | 148.3832        | 0.0325        | 5.2000e-003        | 150.7428        |
| <b>Maximum</b> | <b>0.2623</b> | <b>0.1521</b> | <b>0.7804</b> | <b>1.6400e-003</b> | <b>0.0512</b> | <b>2.7100e-003</b> | <b>0.0539</b> | <b>0.0135</b>  | <b>2.6700e-003</b> | <b>0.0161</b> | <b>0.0000</b> | <b>148.3832</b> | <b>148.3832</b> | <b>0.0325</b> | <b>5.2000e-003</b> | <b>150.7428</b> |

|                          | ROG          | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4          | N2O         | CO2e         |
|--------------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>40.08</b> | <b>90.39</b> | <b>50.58</b> | <b>46.58</b> | <b>34.00</b>  | <b>96.22</b> | <b>63.90</b> | <b>32.85</b>   | <b>96.13</b>  | <b>81.88</b> | <b>0.00</b> | <b>43.27</b> | <b>43.27</b> | <b>22.57</b> | <b>0.00</b> | <b>42.93</b> |

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



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/5/2022   | 11/11/2022 | 5             | 200      |                   |

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

|   |                       |                       |           |            |   |    |
|---|-----------------------|-----------------------|-----------|------------|---|----|
| 4 | Paving                | Paving                | 2/5/2022  | 2/18/2022  | 5 | 10 |
| 5 | Architectural Coating | Architectural Coating | 11/4/2022 | 11/17/2022 | 5 | 10 |

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

**Acres of Grading (Grading Phase): 4**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 102,935; Non-Residential Outdoor: 34,312; Striped Parking Area: 0 (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        |
| 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      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Building Construction | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Building Construction | Welders                   | 3      | 8.00        | 46          | 0.45        |
| Paving                | Cement and Mortar Mixers  | 1      | 6.00        | 9           | 0.56        |
| Paving                | Pavers                    | 1      | 6.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 1      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |



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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            | 5                       | 13.00              | 0.00               | 312.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 22.00              | 11.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 0.0338        | 0.0000             | 0.0338        | 5.1100e-003        | 0.0000             | 5.1100e-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        | 21.2120        |
| <b>Total</b>  | <b>0.0169</b> | <b>0.1662</b> | <b>0.1396</b> | <b>2.4000e-004</b> | <b>0.0338</b> | <b>8.3800e-003</b> | <b>0.0422</b> | <b>5.1100e-003</b> | <b>7.8300e-003</b> | <b>0.0129</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2120</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 7.2000e-004        | 0.0276        | 6.1500e-003        | 1.0000e-004        | 2.6800e-003        | 1.9000e-004        | 2.8800e-003        | 7.4000e-004        | 1.9000e-004        | 9.2000e-004        | 0.0000        | 9.6356         | 9.6356         | 5.1000e-004        | 1.5300e-003        | 10.1040        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726         | 0.8726         | 3.0000e-005        | 3.0000e-005        | 0.8809         |
| <b>Total</b> | <b>1.0900e-003</b> | <b>0.0279</b> | <b>9.8800e-003</b> | <b>1.1000e-004</b> | <b>3.7300e-003</b> | <b>2.0000e-004</b> | <b>3.9300e-003</b> | <b>1.0200e-003</b> | <b>2.0000e-004</b> | <b>1.2000e-003</b> | <b>0.0000</b> | <b>10.5082</b> | <b>10.5082</b> | <b>5.4000e-004</b> | <b>1.5600e-003</b> | <b>10.9848</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0152        | 0.0000             | 0.0152        | 2.3000e-003        | 0.0000             | 2.3000e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 2.8100e-003        | 0.0122        | 0.1472        | 2.4000e-004        |               | 3.7000e-004        | 3.7000e-004   |                    | 3.7000e-004        | 3.7000e-004        | 0.0000        | 21.0777        | 21.0777        | 5.3700e-003        | 0.0000        | 21.2119        |
| <b>Total</b>  | <b>2.8100e-003</b> | <b>0.0122</b> | <b>0.1472</b> | <b>2.4000e-004</b> | <b>0.0152</b> | <b>3.7000e-004</b> | <b>0.0156</b> | <b>2.3000e-003</b> | <b>3.7000e-004</b> | <b>2.6700e-003</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2119</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 7.2000e-004        | 0.0276        | 6.1500e-003        | 1.0000e-004        | 2.6800e-003        | 1.9000e-004        | 2.8800e-003        | 7.4000e-004        | 1.9000e-004        | 9.2000e-004        | 0.0000        | 9.6356         | 9.6356         | 5.1000e-004        | 1.5300e-003        | 10.1040        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726         | 0.8726         | 3.0000e-005        | 3.0000e-005        | 0.8809         |
| <b>Total</b> | <b>1.0900e-003</b> | <b>0.0279</b> | <b>9.8800e-003</b> | <b>1.1000e-004</b> | <b>3.7300e-003</b> | <b>2.0000e-004</b> | <b>3.9300e-003</b> | <b>1.0200e-003</b> | <b>2.0000e-004</b> | <b>1.2000e-003</b> | <b>0.0000</b> | <b>10.5082</b> | <b>10.5082</b> | <b>5.4000e-004</b> | <b>1.5600e-003</b> | <b>10.9848</b> |

**3.3 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        | 6.8500e-003        | 0.0000             | 6.8500e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 3.0800e-003        | 0.0340        | 0.0184        | 4.0000e-005        |               | 1.4800e-003        | 1.4800e-003   |                    | 1.3700e-003        | 1.3700e-003        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>3.0800e-003</b> | <b>0.0340</b> | <b>0.0184</b> | <b>4.0000e-005</b> | <b>0.0142</b> | <b>1.4800e-003</b> | <b>0.0157</b> | <b>6.8500e-003</b> | <b>1.3700e-003</b> | <b>8.2200e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |

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

**Unmitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 6.3700e-003        | 0.0000             | 6.3700e-003        | 3.0800e-003        | 0.0000             | 3.0800e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.0000e-004        | 2.1900e-003        | 0.0218        | 4.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>5.0000e-004</b> | <b>2.1900e-003</b> | <b>0.0218</b> | <b>4.0000e-005</b> | <b>6.3700e-003</b> | <b>7.0000e-005</b> | <b>6.4400e-003</b> | <b>3.0800e-003</b> | <b>7.0000e-005</b> | <b>3.1500e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

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

**Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**3.4 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     | 0.1649        | 1.2503        | 1.2726        | 2.2100e-003        |               | 0.0589        | 0.0589        |                | 0.0569        | 0.0569        | 0.0000        | 181.5769        | 181.5769        | 0.0316        | 0.0000        | 182.3675        |
| <b>Total</b> | <b>0.1649</b> | <b>1.2503</b> | <b>1.2726</b> | <b>2.2100e-003</b> |               | <b>0.0589</b> | <b>0.0589</b> |                | <b>0.0569</b> | <b>0.0569</b> | <b>0.0000</b> | <b>181.5769</b> | <b>181.5769</b> | <b>0.0316</b> | <b>0.0000</b> | <b>182.3675</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.2300e-003        | 0.0591        | 0.0193        | 2.3000e-004        | 7.3300e-003   | 5.4000e-004        | 7.8800e-003   | 2.1200e-003        | 5.2000e-004        | 2.6400e-003        | 0.0000        | 22.1261        | 22.1261        | 7.4000e-004        | 3.1900e-003        | 23.0952        |
| Worker       | 6.2700e-003        | 4.9100e-003   | 0.0631        | 1.6000e-004        | 0.0177        | 1.2000e-004        | 0.0178        | 4.7100e-003        | 1.1000e-004        | 4.8200e-003        | 0.0000        | 14.7665        | 14.7665        | 4.9000e-004        | 4.3000e-004        | 14.9071        |
| <b>Total</b> | <b>8.5000e-003</b> | <b>0.0640</b> | <b>0.0823</b> | <b>3.9000e-004</b> | <b>0.0251</b> | <b>6.6000e-004</b> | <b>0.0257</b> | <b>6.8300e-003</b> | <b>6.3000e-004</b> | <b>7.4600e-003</b> | <b>0.0000</b> | <b>36.8926</b> | <b>36.8926</b> | <b>1.2300e-003</b> | <b>3.6200e-003</b> | <b>38.0024</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |               |               |                |
| Off-Road     | 9.5800e-003        | 0.0415        | 0.4577        | 7.8000e-004        |               | 1.2800e-003        | 1.2800e-003        |                | 1.2800e-003        | 1.2800e-003        | 0.0000        | 68.5899        | 68.5899        | 0.0222        | 0.0000        | 69.1445        |
| <b>Total</b> | <b>9.5800e-003</b> | <b>0.0415</b> | <b>0.4577</b> | <b>7.8000e-004</b> |               | <b>1.2800e-003</b> | <b>1.2800e-003</b> |                | <b>1.2800e-003</b> | <b>1.2800e-003</b> | <b>0.0000</b> | <b>68.5899</b> | <b>68.5899</b> | <b>0.0222</b> | <b>0.0000</b> | <b>69.1445</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.2300e-003        | 0.0591        | 0.0193        | 2.3000e-004        | 7.3300e-003   | 5.4000e-004        | 7.8800e-003   | 2.1200e-003        | 5.2000e-004        | 2.6400e-003        | 0.0000        | 22.1261        | 22.1261        | 7.4000e-004        | 3.1900e-003        | 23.0952        |
| Worker       | 6.2700e-003        | 4.9100e-003   | 0.0631        | 1.6000e-004        | 0.0177        | 1.2000e-004        | 0.0178        | 4.7100e-003        | 1.1000e-004        | 4.8200e-003        | 0.0000        | 14.7665        | 14.7665        | 4.9000e-004        | 4.3000e-004        | 14.9071        |
| <b>Total</b> | <b>8.5000e-003</b> | <b>0.0640</b> | <b>0.0823</b> | <b>3.9000e-004</b> | <b>0.0251</b> | <b>6.6000e-004</b> | <b>0.0257</b> | <b>6.8300e-003</b> | <b>6.3000e-004</b> | <b>7.4600e-003</b> | <b>0.0000</b> | <b>36.8926</b> | <b>36.8926</b> | <b>1.2300e-003</b> | <b>3.6200e-003</b> | <b>38.0024</b> |

**3.5 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     | 3.4400e-003        | 0.0339        | 0.0440        | 7.0000e-005        |               | 1.7400e-003        | 1.7400e-003        |                | 1.6000e-003        | 1.6000e-003        | 0.0000        | 5.8848        | 5.8848        | 1.8700e-003        | 0.0000        | 5.9315        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>3.4400e-003</b> | <b>0.0339</b> | <b>0.0440</b> | <b>7.0000e-005</b> |               | <b>1.7400e-003</b> | <b>1.7400e-003</b> |                | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> | <b>5.8848</b> | <b>5.8848</b> | <b>1.8700e-003</b> | <b>0.0000</b> | <b>5.9315</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 8.0000e-004        | 3.4600e-003        | 0.0493        | 7.0000e-005        |               | 1.1000e-004        | 1.1000e-004        |                | 1.1000e-004        | 1.1000e-004        | 0.0000        | 5.7130        | 5.7130        | 1.8500e-003        | 0.0000        | 5.7591        |
| Paving       | 0.0000             |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>8.0000e-004</b> | <b>3.4600e-003</b> | <b>0.0493</b> | <b>7.0000e-005</b> |               | <b>1.1000e-004</b> | <b>1.1000e-004</b> |                | <b>1.1000e-004</b> | <b>1.1000e-004</b> | <b>0.0000</b> | <b>5.7130</b> | <b>5.7130</b> | <b>1.8500e-003</b> | <b>0.0000</b> | <b>5.7591</b> |



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**3.6 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 | 0.2386        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.0200e-003   | 7.0400e-003        | 9.0700e-003        | 1.0000e-005        |               | 4.1000e-004        | 4.1000e-004        |                | 4.1000e-004        | 4.1000e-004        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.2396</b> | <b>7.0400e-003</b> | <b>9.0700e-003</b> | <b>1.0000e-005</b> |               | <b>4.1000e-004</b> | <b>4.1000e-004</b> |                | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO                 | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |                    |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.2386        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.5000e-004   | 6.4000e-004        | 9.1600e-003        | 1.0000e-005        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.2387</b> | <b>6.4000e-004</b> | <b>9.1600e-003</b> | <b>1.0000e-005</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |



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

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use   | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------|-------------------------|----------|--------|-------------|------------|
|            | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Strip Mall | 0.00                    | 0.00     | 0.00   |             |            |
| Total      | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Strip Mall | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |

**4.4 Fleet Mix**

| Land Use   | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |

**5.0 Energy Detail**

Historical Energy Use: N



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

**Mitigated**

|              | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use     | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Strip Mall   | 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        |
| <b>Total</b> |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|              | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Strip Mall   | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |







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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
| Category    | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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**

**7.2 Water by Land Use**

**Unmitigated**

|              | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | Mgal               | tons/yr | MT/yr         |               |               |               |
| Strip Mall   | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

**Mitigated**

|              | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | Mgal               | tons/yr | MT/yr         |               |               |               |
| Strip Mall   | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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           | tons/yr | MT/yr         |               |               |               |
| Strip Mall   | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use     | tons           | tons/yr | MT/yr         |               |               |               |
| Strip Mall   | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Retail/Restaurant Construction Only**

Los Angeles-Mojave Desert County, Summer

**1.0 Project Characteristics****1.1 Land Usage**

| Land Uses  | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------|-------|----------|-------------|--------------------|------------|
| Strip Mall | 68.62 | 1000sqft | 1.58        | 68,623.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 6.26         | 0.00         |
| tblEnergyUse            | NT24E                        | 3.23         | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.49         | 0.00         |
| tblEnergyUse            | T24E                         | 3.58         | 0.00         |
| tblEnergyUse            | T24NG                        | 1.14         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblLandUse              | LandUseSquareFeet            | 68,620.00    | 68,623.00    |
| tblSolidWaste           | SolidWasteGenerationRate     | 72.05        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 42.04        | 0.00         |
| tblVehicleTrips         | SU_TR                        | 20.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 44.32        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 5,082,856.42 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,115,299.10 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

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



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

| Year           | lb/day         |                |                |               |               |               |               |               |               |               | lb/day        |                   |                   |               |               |                   |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| 2022           | 49.6617        | 19.9089        | 22.7778        | 0.0405        | 7.1647        | 0.9436        | 7.9076        | 3.4465        | 0.8963        | 4.1299        | 0.0000        | 3,812.1031        | 3,812.1031        | 0.7764        | 0.1711        | 3,844.0613        |
| <b>Maximum</b> | <b>49.6617</b> | <b>19.9089</b> | <b>22.7778</b> | <b>0.0405</b> | <b>7.1647</b> | <b>0.9436</b> | <b>7.9076</b> | <b>3.4465</b> | <b>0.8963</b> | <b>4.1299</b> | <b>0.0000</b> | <b>3,812.1031</b> | <b>3,812.1031</b> | <b>0.7764</b> | <b>0.1711</b> | <b>3,844.0613</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 47.9340        | 3.8637        | 15.7214        | 0.0348        | 3.2693        | 0.0576        | 3.3035        | 1.5629         | 0.0567        | 1.5970        | 0.0000        | 3,485.4598        | 3,485.4598        | 0.6684        | 0.1711        | 3,552.7363        |
| <b>Maximum</b> | <b>47.9340</b> | <b>3.8637</b> | <b>15.7214</b> | <b>0.0348</b> | <b>3.2693</b> | <b>0.0576</b> | <b>3.3035</b> | <b>1.5629</b>  | <b>0.0567</b> | <b>1.5970</b> | <b>0.0000</b> | <b>3,485.4598</b> | <b>3,485.4598</b> | <b>0.6684</b> | <b>0.1711</b> | <b>3,552.7363</b> |

|                          | ROG         | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2    | Total CO2   | CH4          | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>3.48</b> | <b>80.59</b> | <b>30.98</b> | <b>14.10</b> | <b>54.37</b>  | <b>93.89</b> | <b>58.22</b> | <b>54.65</b>   | <b>93.67</b>  | <b>61.33</b> | <b>0.00</b> | <b>8.57</b> | <b>8.57</b> | <b>13.91</b> | <b>0.00</b> | <b>7.58</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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         | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |               | 0.0160        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0160</b> |

**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         | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |               | 0.0160        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0160</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/5/2022   | 11/11/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 2/5/2022   | 2/18/2022  | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/4/2022  | 11/17/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 102,935; Non-Residential Outdoor: 34,312; Striped Parking Area: 0 (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        |
| 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        |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Cranes                    | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts                 | 1 | 6.00 | 89  | 0.20 |
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |
| Paving                | Cement and Mortar Mixers  | 1 | 6.00 | 9   | 0.56 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Architectural Coating | Air Compressors           | 1 | 6.00 | 78  | 0.48 |

**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               | 312.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 22.00              | 11.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022**

**Unmitigated Construction On-Site**

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.3775        | 0.0000        | 3.3775        | 0.5114         | 0.0000        | 0.5114        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>3.3775</b> | <b>0.8379</b> | <b>4.2154</b> | <b>0.5114</b>  | <b>0.7829</b> | <b>1.2943</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0727        | 2.6200        | 0.6109        | 9.6900e-003   | 0.2731        | 0.0195        | 0.2925        | 0.0749         | 0.0186        | 0.0935        |          | 1,062.0099        | 1,062.0099        | 0.0564        | 0.1685        | 1,113.6336        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331          | 100.0331          | 3.1000e-003   | 2.5900e-003   | 100.8837          |
| <b>Total</b> | <b>0.1104</b> | <b>2.6458</b> | <b>1.0029</b> | <b>0.0107</b> | <b>0.3799</b> | <b>0.0202</b> | <b>0.4000</b> | <b>0.1032</b>  | <b>0.0193</b> | <b>0.1225</b> |          | <b>1,162.0430</b> | <b>1,162.0430</b> | <b>0.0595</b> | <b>0.1711</b> | <b>1,214.5173</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.5199        | 0.0000        | 1.5199        | 0.2301         | 0.0000        | 0.2301        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.5199</b> | <b>0.0375</b> | <b>1.5573</b> | <b>0.2301</b>  | <b>0.0375</b> | <b>0.2676</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0727        | 2.6200        | 0.6109        | 9.6900e-003   | 0.2731        | 0.0195        | 0.2925        | 0.0749         | 0.0186        | 0.0935        |          | 1,062.0099        | 1,062.0099        | 0.0564        | 0.1685        | 1,113.6336        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331          | 100.0331          | 3.1000e-003   | 2.5900e-003   | 100.8837          |
| <b>Total</b> | <b>0.1104</b> | <b>2.6458</b> | <b>1.0029</b> | <b>0.0107</b> | <b>0.3799</b> | <b>0.0202</b> | <b>0.4000</b> | <b>0.1032</b>  | <b>0.0193</b> | <b>0.1225</b> |          | <b>1,162.0430</b> | <b>1,162.0430</b> | <b>0.0595</b> | <b>0.1711</b> | <b>1,214.5173</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |



Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

**3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0225        | 0.5627        | 0.1899        | 2.2700e-003        | 0.0745        | 5.4200e-003        | 0.0800        | 0.0215         | 5.1900e-003        | 0.0266        |          | 243.8616        | 243.8616        | 8.1500e-003   | 0.0351        | 254.5325        |
| Worker       | 0.0638        | 0.0436        | 0.6635        | 1.6600e-003        | 0.1807        | 1.1900e-003        | 0.1819        | 0.0479         | 1.0900e-003        | 0.0490        |          | 169.2867        | 169.2867        | 5.2400e-003   | 4.3900e-003   | 170.7263        |
| <b>Total</b> | <b>0.0863</b> | <b>0.6063</b> | <b>0.8533</b> | <b>3.9300e-003</b> | <b>0.2553</b> | <b>6.6100e-003</b> | <b>0.2619</b> | <b>0.0694</b>  | <b>6.2800e-003</b> | <b>0.0757</b> |          | <b>413.1483</b> | <b>413.1483</b> | <b>0.0134</b> | <b>0.0395</b> | <b>425.2588</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0225        | 0.5627        | 0.1899        | 2.2700e-003        | 0.0745        | 5.4200e-003        | 0.0800        | 0.0215         | 5.1900e-003        | 0.0266        |          | 243.8616        | 243.8616        | 8.1500e-003   | 0.0351        | 254.5325        |
| Worker       | 0.0638        | 0.0436        | 0.6635        | 1.6600e-003        | 0.1807        | 1.1900e-003        | 0.1819        | 0.0479         | 1.0900e-003        | 0.0490        |          | 169.2867        | 169.2867        | 5.2400e-003   | 4.3900e-003   | 170.7263        |
| <b>Total</b> | <b>0.0863</b> | <b>0.6063</b> | <b>0.8533</b> | <b>3.9300e-003</b> | <b>0.2553</b> | <b>6.6100e-003</b> | <b>0.2619</b> | <b>0.0694</b>  | <b>6.2800e-003</b> | <b>0.0757</b> |          | <b>413.1483</b> | <b>413.1483</b> | <b>0.0134</b> | <b>0.0395</b> | <b>425.2588</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

**3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 47.7106        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>47.9151</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 47.7106        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>47.7403</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use   | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------|-------------------------|----------|--------|-------------|------------|
|            | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Strip Mall | 0.00                    | 0.00     | 0.00   |             |            |
| Total      | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Strip Mall | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

|            |          |          |          |          |          |          |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Strip Mall   | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use     | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Strip Mall   | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   | 6.5000e-004 | 6.0000e-005 | 7.0000e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0150    | 0.0150    | 4.0000e-005 |     | 0.0160 |
| Unmitigated | 6.5000e-004 | 6.0000e-005 | 7.0000e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0150    | 0.0150    | 4.0000e-005 |     | 0.0160 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |     | 0.0160        |
| <b>Total</b>          | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> |     | <b>0.0160</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

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

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |     | 0.0160        |
| <b>Total</b>          | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> |     | <b>0.0160</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Summer

**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**

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## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - Retail/Restaurant Construction Only****Los Angeles-Mojave Desert County, Winter****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses  | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|------------|-------|----------|-------------|--------------------|------------|
| Strip Mall | 68.62 | 1000sqft | 1.58        | 68,623.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase -

Demolition - See Assumptions

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately

Solid Waste - Operational Emissions Modeled Separately



Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 6.26         | 0.00         |
| tblEnergyUse            | NT24E                        | 3.23         | 0.00         |
| tblEnergyUse            | NT24NG                       | 0.49         | 0.00         |
| tblEnergyUse            | T24E                         | 3.58         | 0.00         |
| tblEnergyUse            | T24NG                        | 1.14         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblLandUse              | LandUseSquareFeet            | 68,620.00    | 68,623.00    |
| tblSolidWaste           | SolidWasteGenerationRate     | 72.05        | 0.00         |
| tblVehicleTrips         | ST_TR                        | 42.04        | 0.00         |
| tblVehicleTrips         | SU_TR                        | 20.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 44.32        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 5,082,856.42 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,115,299.10 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

Unmitigated Construction

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

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

| Year           | lb/day         |                |                |               |               |               |               |               |               |               | lb/day        |                   |                   |               |               |                   |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| 2022           | 49.6657        | 19.9393        | 22.7094        | 0.0404        | 7.1647        | 0.9437        | 7.9076        | 3.4465        | 0.8963        | 4.1299        | 0.0000        | 3,798.0302        | 3,798.0302        | 0.7766        | 0.1713        | 3,830.1493        |
| <b>Maximum</b> | <b>49.6657</b> | <b>19.9393</b> | <b>22.7094</b> | <b>0.0404</b> | <b>7.1647</b> | <b>0.9437</b> | <b>7.9076</b> | <b>3.4465</b> | <b>0.8963</b> | <b>4.1299</b> | <b>0.0000</b> | <b>3,798.0302</b> | <b>3,798.0302</b> | <b>0.7766</b> | <b>0.1713</b> | <b>3,830.1493</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 47.9379        | 3.9727        | 15.7043        | 0.0348        | 3.2693        | 0.0577        | 3.3035        | 1.5629         | 0.0568        | 1.5970        | 0.0000        | 3,480.5118        | 3,480.5118        | 0.6686        | 0.1713        | 3,547.8574        |
| <b>Maximum</b> | <b>47.9379</b> | <b>3.9727</b> | <b>15.7043</b> | <b>0.0348</b> | <b>3.2693</b> | <b>0.0577</b> | <b>3.3035</b> | <b>1.5629</b>  | <b>0.0568</b> | <b>1.5970</b> | <b>0.0000</b> | <b>3,480.5118</b> | <b>3,480.5118</b> | <b>0.6686</b> | <b>0.1713</b> | <b>3,547.8574</b> |

|                          | ROG         | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2    | Total CO2   | CH4          | N2O         | CO2e        |
|--------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>3.48</b> | <b>80.08</b> | <b>30.85</b> | <b>13.92</b> | <b>54.37</b>  | <b>93.89</b> | <b>58.22</b> | <b>54.65</b>   | <b>93.67</b>  | <b>61.33</b> | <b>0.00</b> | <b>8.36</b> | <b>8.36</b> | <b>13.91</b> | <b>0.00</b> | <b>7.37</b> |



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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         | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |               | 0.0160        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0160</b> |

**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         | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |               | 0.0160        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.0160</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/5/2022   | 11/11/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 2/5/2022   | 2/18/2022  | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/4/2022  | 11/17/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 102,935; Non-Residential Outdoor: 34,312; Striped Parking Area: 0 (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        |
| 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        |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Cranes                    | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts                 | 1 | 6.00 | 89  | 0.20 |
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |
| Paving                | Cement and Mortar Mixers  | 1 | 6.00 | 9   | 0.56 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Architectural Coating | Air Compressors           | 1 | 6.00 | 78  | 0.48 |

**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               | 312.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 22.00              | 11.00              | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 3.3775        | 0.0000        | 3.3775        | 0.5114         | 0.0000        | 0.5114        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>3.3775</b> | <b>0.8379</b> | <b>4.2154</b> | <b>0.5114</b>  | <b>0.7829</b> | <b>1.2943</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0709        | 2.7263        | 0.6216        | 9.7000e-003   | 0.2731        | 0.0195        | 0.2926        | 0.0749         | 0.0187        | 0.0935        |          | 1,062.3213        | 1,062.3213        | 0.0563        | 0.1686        | 1,113.9590        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737           | 94.7737           | 3.1900e-003   | 2.7700e-003   | 95.6794           |
| <b>Total</b> | <b>0.1107</b> | <b>2.7548</b> | <b>0.9859</b> | <b>0.0106</b> | <b>0.3799</b> | <b>0.0202</b> | <b>0.4001</b> | <b>0.1032</b>  | <b>0.0193</b> | <b>0.1225</b> |          | <b>1,157.0950</b> | <b>1,157.0950</b> | <b>0.0595</b> | <b>0.1713</b> | <b>1,209.6384</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.5199        | 0.0000        | 1.5199        | 0.2301         | 0.0000        | 0.2301        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.5199</b> | <b>0.0375</b> | <b>1.5573</b> | <b>0.2301</b>  | <b>0.0375</b> | <b>0.2676</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|---------------|-------------------|
| Category     | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |                   |                   |               |               |                   |
| Hauling      | 0.0709        | 2.7263        | 0.6216        | 9.7000e-003   | 0.2731        | 0.0195        | 0.2926        | 0.0749         | 0.0187        | 0.0935        |          | 1,062.3213        | 1,062.3213        | 0.0563        | 0.1686        | 1,113.9590        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004   | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737           | 94.7737           | 3.1900e-003   | 2.7700e-003   | 95.6794           |
| <b>Total</b> | <b>0.1107</b> | <b>2.7548</b> | <b>0.9859</b> | <b>0.0106</b> | <b>0.3799</b> | <b>0.0202</b> | <b>0.4001</b> | <b>0.1032</b>  | <b>0.0193</b> | <b>0.1225</b> |          | <b>1,157.0950</b> | <b>1,157.0950</b> | <b>0.0595</b> | <b>0.1713</b> | <b>1,209.6384</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0222        | 0.5858        | 0.1962        | 2.2700e-003        | 0.0745        | 5.4400e-003        | 0.0800        | 0.0215         | 5.2100e-003        | 0.0267        |          | 243.9485        | 243.9485        | 8.1200e-003   | 0.0352        | 254.6320        |
| Worker       | 0.0674        | 0.0482        | 0.6165        | 1.5800e-003        | 0.1807        | 1.1900e-003        | 0.1819        | 0.0479         | 1.0900e-003        | 0.0490        |          | 160.3863        | 160.3863        | 5.4000e-003   | 4.6900e-003   | 161.9190        |
| <b>Total</b> | <b>0.0896</b> | <b>0.6340</b> | <b>0.8127</b> | <b>3.8500e-003</b> | <b>0.2553</b> | <b>6.6300e-003</b> | <b>0.2619</b> | <b>0.0694</b>  | <b>6.3000e-003</b> | <b>0.0757</b> |          | <b>404.3348</b> | <b>404.3348</b> | <b>0.0135</b> | <b>0.0399</b> | <b>416.5510</b> |



## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0222        | 0.5858        | 0.1962        | 2.2700e-003        | 0.0745        | 5.4400e-003        | 0.0800        | 0.0215         | 5.2100e-003        | 0.0267        |          | 243.9485        | 243.9485        | 8.1200e-003   | 0.0352        | 254.6320        |
| Worker       | 0.0674        | 0.0482        | 0.6165        | 1.5800e-003        | 0.1807        | 1.1900e-003        | 0.1819        | 0.0479         | 1.0900e-003        | 0.0490        |          | 160.3863        | 160.3863        | 5.4000e-003   | 4.6900e-003   | 161.9190        |
| <b>Total</b> | <b>0.0896</b> | <b>0.6340</b> | <b>0.8127</b> | <b>3.8500e-003</b> | <b>0.2553</b> | <b>6.6300e-003</b> | <b>0.2619</b> | <b>0.0694</b>  | <b>6.3000e-003</b> | <b>0.0757</b> |          | <b>404.3348</b> | <b>404.3348</b> | <b>0.0135</b> | <b>0.0399</b> | <b>416.5510</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

**3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 47.7106        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>47.9151</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 47.7106        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>47.7403</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use   | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------|-------------------------|----------|--------|-------------|------------|
|            | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Strip Mall | 0.00                    | 0.00     | 0.00   |             |            |
| Total      | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use   | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|            | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Strip Mall | 9.50       | 7.30       | 7.30        | 16.60      | 64.40      | 19.00       | 45             | 40       | 15      |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

|            |          |          |          |          |          |          |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 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 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

**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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Strip Mall   | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|              | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use     | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Strip Mall   | 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        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert 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   | 6.5000e-004 | 6.0000e-005 | 7.0000e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0150    | 0.0150    | 4.0000e-005 |     | 0.0160 |
| Unmitigated | 6.5000e-004 | 6.0000e-005 | 7.0000e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0150    | 0.0150    | 4.0000e-005 |     | 0.0160 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |     | 0.0160        |
| <b>Total</b>          | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> |     | <b>0.0160</b> |

Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

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

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 6.5000e-004        | 6.0000e-005        | 7.0000e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0150        | 0.0150        | 4.0000e-005        |     | 0.0160        |
| <b>Total</b>          | <b>6.5000e-004</b> | <b>6.0000e-005</b> | <b>7.0000e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0150</b> | <b>0.0150</b> | <b>4.0000e-005</b> |     | <b>0.0160</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - Retail/Restaurant Construction Only - Los Angeles-Mojave Desert County, Winter

**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**

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## Palmdale GPU - School - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - School  
Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses         | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------|-------|----------|-------------|--------------------|------------|
| Elementary School | 51.10 | 1000sqft | 1.17        | 51,102.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition -

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately



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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 12/8/2022    | 11/14/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 11/24/2022   | 2/17/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/25/2022   | 11/1/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/11/2022   | 2/4/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.59         | 0.00         |
| tblEnergyUse            | NT24E                        | 1.59         | 0.00         |
| tblEnergyUse            | NT24NG                       | 1.08         | 0.00         |
| tblEnergyUse            | T24E                         | 1.56         | 0.00         |
| tblEnergyUse            | T24NG                        | 9.23         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 66.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 19.52        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,481,742.47 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,810,194.92 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

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

Palmdale GPU - School - Los Angeles-Mojave Desert County, Annual

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

|                |               |               |               |                    | PM10          | PM10          | Total         | PM2.5         | PM2.5         | Total         |               |                 |                 |               |                    |                 |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |               |               |               |               |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.3758        | 1.5601        | 1.5693        | 2.9800e-003        | 0.0655        | 0.0716        | 0.1370        | 0.0177        | 0.0687        | 0.0865        | 0.0000        | 252.3658        | 252.3658        | 0.0416        | 3.9100e-003        | 254.5711        |
| <b>Maximum</b> | <b>0.3758</b> | <b>1.5601</b> | <b>1.5693</b> | <b>2.9800e-003</b> | <b>0.0655</b> | <b>0.0716</b> | <b>0.1370</b> | <b>0.0177</b> | <b>0.0687</b> | <b>0.0865</b> | <b>0.0000</b> | <b>252.3658</b> | <b>252.3658</b> | <b>0.0416</b> | <b>3.9100e-003</b> | <b>254.5711</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.2003        | 0.1287        | 0.7707        | 1.5500e-003        | 0.0438        | 2.5100e-003        | 0.0463        | 0.0119         | 2.4800e-003        | 0.0144        | 0.0000        | 139.2069        | 139.2069        | 0.0321        | 3.9100e-003        | 141.1757        |
| <b>Maximum</b> | <b>0.2003</b> | <b>0.1287</b> | <b>0.7707</b> | <b>1.5500e-003</b> | <b>0.0438</b> | <b>2.5100e-003</b> | <b>0.0463</b> | <b>0.0119</b>  | <b>2.4800e-003</b> | <b>0.0144</b> | <b>0.0000</b> | <b>139.2069</b> | <b>139.2069</b> | <b>0.0321</b> | <b>3.9100e-003</b> | <b>141.1757</b> |

|                          | ROG          | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4          | N2O         | CO2e         |
|--------------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>46.70</b> | <b>91.75</b> | <b>50.89</b> | <b>47.99</b> | <b>33.03</b>  | <b>96.49</b> | <b>66.18</b> | <b>33.03</b>   | <b>96.39</b>  | <b>83.39</b> | <b>0.00</b> | <b>44.84</b> | <b>44.84</b> | <b>22.77</b> | <b>0.00</b> | <b>44.54</b> |

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





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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio- CO2   | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail****Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/4/2022   | 11/10/2022 | 5             | 200      |                   |

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

|   |                       |                       |           |            |   |    |
|---|-----------------------|-----------------------|-----------|------------|---|----|
| 4 | Paving                | Paving                | 2/4/2022  | 2/17/2022  | 5 | 10 |
| 5 | Architectural Coating | Architectural Coating | 11/1/2022 | 11/14/2022 | 5 | 10 |

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

**Acres of Grading (Grading Phase): 4**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 76,653; Non-Residential Outdoor: 25,551; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers  | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                 | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Demolition            | Tractors/Loaders/Backhoes | 3      | 8.00        | 97          | 0.37        |
| Paving                | Pavers                    | 1      | 6.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 1      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 1      | 7.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Paving                | Tractors/Loaders/Backhoes | 1      | 8.00        | 97          | 0.37        |
| Building Construction | Tractors/Loaders/Backhoes | 1      | 6.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 7.00        | 97          | 0.37        |
| Building Construction | Welders                   | 3      | 8.00        | 46          | 0.45        |

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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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 21.00              | 8.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 232.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 0.0252        | 0.0000             | 0.0252        | 3.8100e-003        | 0.0000             | 3.8100e-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        | 21.2120        |
| <b>Total</b>  | <b>0.0169</b> | <b>0.1662</b> | <b>0.1396</b> | <b>2.4000e-004</b> | <b>0.0252</b> | <b>8.3800e-003</b> | <b>0.0335</b> | <b>3.8100e-003</b> | <b>7.8300e-003</b> | <b>0.0116</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2120</b> |

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

|              | ROG                | NOx           | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |               |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 5.3000e-004        | 0.0205        | 4.5700e-003        | 7.0000e-005        | 2.0000e-003        | 1.4000e-004        | 2.1400e-003        | 5.5000e-004        | 1.4000e-004        | 6.9000e-004        | 0.0000        | 7.1649        | 7.1649        | 3.8000e-004        | 1.1400e-003        | 7.5132        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726        | 0.8726        | 3.0000e-005        | 3.0000e-005        | 0.8809        |
| <b>Total</b> | <b>9.0000e-004</b> | <b>0.0208</b> | <b>8.3000e-003</b> | <b>8.0000e-005</b> | <b>3.0500e-003</b> | <b>1.5000e-004</b> | <b>3.1900e-003</b> | <b>8.3000e-004</b> | <b>1.5000e-004</b> | <b>9.7000e-004</b> | <b>0.0000</b> | <b>8.0375</b> | <b>8.0375</b> | <b>4.1000e-004</b> | <b>1.1700e-003</b> | <b>8.3941</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0113        | 0.0000             | 0.0113        | 1.7100e-003        | 0.0000             | 1.7100e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 2.8100e-003        | 0.0122        | 0.1472        | 2.4000e-004        |               | 3.7000e-004        | 3.7000e-004   |                    | 3.7000e-004        | 3.7000e-004        | 0.0000        | 21.0777        | 21.0777        | 5.3700e-003        | 0.0000        | 21.2119        |
| <b>Total</b>  | <b>2.8100e-003</b> | <b>0.0122</b> | <b>0.1472</b> | <b>2.4000e-004</b> | <b>0.0113</b> | <b>3.7000e-004</b> | <b>0.0117</b> | <b>1.7100e-003</b> | <b>3.7000e-004</b> | <b>2.0800e-003</b> | <b>0.0000</b> | <b>21.0777</b> | <b>21.0777</b> | <b>5.3700e-003</b> | <b>0.0000</b> | <b>21.2119</b> |

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

|              | ROG                | NOx           | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |               |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 5.3000e-004        | 0.0205        | 4.5700e-003        | 7.0000e-005        | 2.0000e-003        | 1.4000e-004        | 2.1400e-003        | 5.5000e-004        | 1.4000e-004        | 6.9000e-004        | 0.0000        | 7.1649        | 7.1649        | 3.8000e-004        | 1.1400e-003        | 7.5132        |
| Vendor       | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.7000e-004        | 2.9000e-004   | 3.7300e-003        | 1.0000e-005        | 1.0500e-003        | 1.0000e-005        | 1.0500e-003        | 2.8000e-004        | 1.0000e-005        | 2.8000e-004        | 0.0000        | 0.8726        | 0.8726        | 3.0000e-005        | 3.0000e-005        | 0.8809        |
| <b>Total</b> | <b>9.0000e-004</b> | <b>0.0208</b> | <b>8.3000e-003</b> | <b>8.0000e-005</b> | <b>3.0500e-003</b> | <b>1.5000e-004</b> | <b>3.1900e-003</b> | <b>8.3000e-004</b> | <b>1.5000e-004</b> | <b>9.7000e-004</b> | <b>0.0000</b> | <b>8.0375</b> | <b>8.0375</b> | <b>4.1000e-004</b> | <b>1.1700e-003</b> | <b>8.3941</b> |

**3.3 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        | 6.8500e-003        | 0.0000             | 6.8500e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 3.0800e-003        | 0.0340        | 0.0184        | 4.0000e-005        |               | 1.4800e-003        | 1.4800e-003   |                    | 1.3700e-003        | 1.3700e-003        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>3.0800e-003</b> | <b>0.0340</b> | <b>0.0184</b> | <b>4.0000e-005</b> | <b>0.0142</b> | <b>1.4800e-003</b> | <b>0.0157</b> | <b>6.8500e-003</b> | <b>1.3700e-003</b> | <b>8.2200e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx                | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|---------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category      | tons/yr            |                    |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |               |               |
| Fugitive Dust |                    |                    |               |                    | 6.3700e-003        | 0.0000             | 6.3700e-003        | 3.0800e-003        | 0.0000             | 3.0800e-003        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road      | 5.0000e-004        | 2.1900e-003        | 0.0218        | 4.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        |                    | 7.0000e-005        | 7.0000e-005        | 0.0000        | 3.6205        | 3.6205        | 1.1700e-003        | 0.0000        | 3.6498        |
| <b>Total</b>  | <b>5.0000e-004</b> | <b>2.1900e-003</b> | <b>0.0218</b> | <b>4.0000e-005</b> | <b>6.3700e-003</b> | <b>7.0000e-005</b> | <b>6.4400e-003</b> | <b>3.0800e-003</b> | <b>7.0000e-005</b> | <b>3.1500e-003</b> | <b>0.0000</b> | <b>3.6205</b> | <b>3.6205</b> | <b>1.1700e-003</b> | <b>0.0000</b> | <b>3.6498</b> |

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**3.4 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     | 0.1649        | 1.2503        | 1.2726        | 2.2100e-003        |               | 0.0589        | 0.0589        |                | 0.0569        | 0.0569        | 0.0000        | 181.5769        | 181.5769        | 0.0316        | 0.0000        | 182.3675        |
| <b>Total</b> | <b>0.1649</b> | <b>1.2503</b> | <b>1.2726</b> | <b>2.2100e-003</b> |               | <b>0.0589</b> | <b>0.0589</b> |                | <b>0.0569</b> | <b>0.0569</b> | <b>0.0000</b> | <b>181.5769</b> | <b>181.5769</b> | <b>0.0316</b> | <b>0.0000</b> | <b>182.3675</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.6200e-003        | 0.0430        | 0.0140        | 1.7000e-004        | 5.3300e-003   | 3.9000e-004        | 5.7300e-003   | 1.5400e-003        | 3.8000e-004        | 1.9200e-003        | 0.0000        | 16.0917        | 16.0917        | 5.4000e-004        | 2.3200e-003        | 16.7965        |
| Worker       | 5.9800e-003        | 4.6900e-003   | 0.0602        | 1.5000e-004        | 0.0169        | 1.1000e-004        | 0.0170        | 4.4900e-003        | 1.0000e-004        | 4.6000e-003        | 0.0000        | 14.0953        | 14.0953        | 4.7000e-004        | 4.1000e-004        | 14.2295        |
| <b>Total</b> | <b>7.6000e-003</b> | <b>0.0477</b> | <b>0.0742</b> | <b>3.2000e-004</b> | <b>0.0222</b> | <b>5.0000e-004</b> | <b>0.0228</b> | <b>6.0300e-003</b> | <b>4.8000e-004</b> | <b>6.5200e-003</b> | <b>0.0000</b> | <b>30.1870</b> | <b>30.1870</b> | <b>1.0100e-003</b> | <b>2.7300e-003</b> | <b>31.0261</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |               |               |                |
| Off-Road     | 9.5800e-003        | 0.0415        | 0.4577        | 7.8000e-004        |               | 1.2800e-003        | 1.2800e-003        |                | 1.2800e-003        | 1.2800e-003        | 0.0000        | 68.5899        | 68.5899        | 0.0222        | 0.0000        | 69.1445        |
| <b>Total</b> | <b>9.5800e-003</b> | <b>0.0415</b> | <b>0.4577</b> | <b>7.8000e-004</b> |               | <b>1.2800e-003</b> | <b>1.2800e-003</b> |                | <b>1.2800e-003</b> | <b>1.2800e-003</b> | <b>0.0000</b> | <b>68.5899</b> | <b>68.5899</b> | <b>0.0222</b> | <b>0.0000</b> | <b>69.1445</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.6200e-003        | 0.0430        | 0.0140        | 1.7000e-004        | 5.3300e-003   | 3.9000e-004        | 5.7300e-003   | 1.5400e-003        | 3.8000e-004        | 1.9200e-003        | 0.0000        | 16.0917        | 16.0917        | 5.4000e-004        | 2.3200e-003        | 16.7965        |
| Worker       | 5.9800e-003        | 4.6900e-003   | 0.0602        | 1.5000e-004        | 0.0169        | 1.1000e-004        | 0.0170        | 4.4900e-003        | 1.0000e-004        | 4.6000e-003        | 0.0000        | 14.0953        | 14.0953        | 4.7000e-004        | 4.1000e-004        | 14.2295        |
| <b>Total</b> | <b>7.6000e-003</b> | <b>0.0477</b> | <b>0.0742</b> | <b>3.2000e-004</b> | <b>0.0222</b> | <b>5.0000e-004</b> | <b>0.0228</b> | <b>6.0300e-003</b> | <b>4.8000e-004</b> | <b>6.5200e-003</b> | <b>0.0000</b> | <b>30.1870</b> | <b>30.1870</b> | <b>1.0100e-003</b> | <b>2.7300e-003</b> | <b>31.0261</b> |

**3.5 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     | 3.4400e-003        | 0.0339        | 0.0440        | 7.0000e-005        |               | 1.7400e-003        | 1.7400e-003        |                | 1.6000e-003        | 1.6000e-003        | 0.0000        | 5.8848        | 5.8848        | 1.8700e-003        | 0.0000        | 5.9315        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>3.4400e-003</b> | <b>0.0339</b> | <b>0.0440</b> | <b>7.0000e-005</b> |               | <b>1.7400e-003</b> | <b>1.7400e-003</b> |                | <b>1.6000e-003</b> | <b>1.6000e-003</b> | <b>0.0000</b> | <b>5.8848</b> | <b>5.8848</b> | <b>1.8700e-003</b> | <b>0.0000</b> | <b>5.9315</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 8.0000e-004        | 3.4600e-003        | 0.0493        | 7.0000e-005        |               | 1.1000e-004        | 1.1000e-004        |                | 1.1000e-004        | 1.1000e-004        | 0.0000        | 5.7130        | 5.7130        | 1.8500e-003        | 0.0000        | 5.7591        |
| Paving       | 0.0000             |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>8.0000e-004</b> | <b>3.4600e-003</b> | <b>0.0493</b> | <b>7.0000e-005</b> |               | <b>1.1000e-004</b> | <b>1.1000e-004</b> |                | <b>1.1000e-004</b> | <b>1.1000e-004</b> | <b>0.0000</b> | <b>5.7130</b> | <b>5.7130</b> | <b>1.8500e-003</b> | <b>0.0000</b> | <b>5.7591</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.9000e-004        | 1.5000e-004        | 1.8600e-003        | 0.0000        | 5.2000e-004        | 0.0000        | 5.3000e-004        | 1.4000e-004        | 0.0000        | 1.4000e-004        | 0.0000        | 0.4363        | 0.4363        | 1.0000e-005        | 1.0000e-005        | 0.4404        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.5000e-004</b> | <b>1.8600e-003</b> | <b>0.0000</b> | <b>5.2000e-004</b> | <b>0.0000</b> | <b>5.3000e-004</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>0.4363</b> | <b>0.4363</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.4404</b> |

**3.6 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 | 0.1776        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.0200e-003   | 7.0400e-003        | 9.0700e-003        | 1.0000e-005        |               | 4.1000e-004        | 4.1000e-004        |                | 4.1000e-004        | 4.1000e-004        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.1787</b> | <b>7.0400e-003</b> | <b>9.0700e-003</b> | <b>1.0000e-005</b> |               | <b>4.1000e-004</b> | <b>4.1000e-004</b> |                | <b>4.1000e-004</b> | <b>4.1000e-004</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Annual

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

|              | ROG                | NOx                | CO                 | SO2           | Fugitive PM10      | Exhaust PM10  | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5 | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Category     | tons/yr            |                    |                    |               |                    |               |                    |                    |               |                    | MT/yr         |               |               |               |               |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Worker       | 6.0000e-005        | 4.0000e-005        | 5.7000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1342        | 0.1342        | 0.0000        | 0.0000        | 0.1355        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>4.0000e-005</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>0.1342</b> | <b>0.1342</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.1355</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO                 | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |                    |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.1776        |                    |                    |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.5000e-004   | 6.4000e-004        | 9.1600e-003        | 1.0000e-005        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        | 0.0000        | 1.2766        | 1.2766        | 8.0000e-005        | 0.0000        | 1.2787        |
| <b>Total</b>    | <b>0.1778</b> | <b>6.4000e-004</b> | <b>9.1600e-003</b> | <b>1.0000e-005</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>1.2766</b> | <b>1.2766</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>1.2787</b> |



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

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------|-------------------------|----------|--------|-------------|------------|
|                   | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Elementary School | 0.00                    | 0.00     | 0.00   |             |            |
| Total             | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use          | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Elementary School | 9.50       | 7.30       | 7.30        | 65.00      | 30.00      | 5.00        | 63             | 25       | 12      |

**4.4 Fleet Mix**

| Land Use          | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Elementary School | 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



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

**Mitigated**

|                   | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use          | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Elementary School | 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        |
| <b>Total</b>      |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                   | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use          | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Elementary School | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>      |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |







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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

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

## Palmdale GPU - School - Los Angeles-Mojave Desert 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               | tons/yr | MT/yr         |               |               |               |
| Elementary School | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>      |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

**Mitigated**

|                   | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use          | Mgal               | tons/yr | MT/yr         |               |               |               |
| Elementary School | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>      |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Palmdale GPU - School - Los Angeles-Mojave Desert 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           | tons/yr | MT/yr         |               |               |               |
| Elementary School | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>      |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                   | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use          | tons           | tons/yr | MT/yr         |               |               |               |
| Elementary School | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>      |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - School****Los Angeles-Mojave Desert County, Summer****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses         | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------|-------|----------|-------------|--------------------|------------|
| Elementary School | 51.10 | 1000sqft | 1.17        | 51,102.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition -

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately





Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 12/8/2022    | 11/14/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 11/24/2022   | 2/17/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/25/2022   | 11/1/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/11/2022   | 2/4/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.59         | 0.00         |
| tblEnergyUse            | NT24E                        | 1.59         | 0.00         |
| tblEnergyUse            | NT24NG                       | 1.08         | 0.00         |
| tblEnergyUse            | T24E                         | 1.56         | 0.00         |
| tblEnergyUse            | T24NG                        | 9.23         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 66.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 19.52        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,481,742.47 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,810,194.92 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

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

Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

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

|                |                |                |                |               | PM10          | PM10          | Total         | PM2.5         | PM2.5         | Total         |               |                   |                   |               |               |                   |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |               |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 37.4707        | 19.7534        | 22.6959        | 0.0398        | 7.1647        | 0.9421        | 7.9076        | 3.4465        | 0.8948        | 4.1299        | 0.0000        | 3,737.9005        | 3,737.9005        | 0.7739        | 0.1279        | 3,766.8831        |
| <b>Maximum</b> | <b>37.4707</b> | <b>19.7534</b> | <b>22.6959</b> | <b>0.0398</b> | <b>7.1647</b> | <b>0.9421</b> | <b>7.9076</b> | <b>3.4465</b> | <b>0.8948</b> | <b>4.1299</b> | <b>0.0000</b> | <b>3,737.9005</b> | <b>3,737.9005</b> | <b>0.7739</b> | <b>0.1279</b> | <b>3,766.8831</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 35.7430        | 3.1919        | 15.5918        | 0.0323        | 3.2693        | 0.0527        | 3.3035        | 1.5629         | 0.0520        | 1.5970        | 0.0000        | 3,213.1496        | 3,213.1496        | 0.6659        | 0.1279        | 3,267.1893        |
| <b>Maximum</b> | <b>35.7430</b> | <b>3.1919</b> | <b>15.5918</b> | <b>0.0323</b> | <b>3.2693</b> | <b>0.0527</b> | <b>3.3035</b> | <b>1.5629</b>  | <b>0.0520</b> | <b>1.5970</b> | <b>0.0000</b> | <b>3,213.1496</b> | <b>3,213.1496</b> | <b>0.6659</b> | <b>0.1279</b> | <b>3,267.1893</b> |

|                          | ROG         | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4          | N2O         | CO2e         |
|--------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>4.61</b> | <b>83.84</b> | <b>31.30</b> | <b>18.84</b> | <b>54.37</b>  | <b>94.41</b> | <b>58.22</b> | <b>54.65</b>   | <b>94.19</b>  | <b>61.33</b> | <b>0.00</b> | <b>14.04</b> | <b>14.04</b> | <b>13.96</b> | <b>0.00</b> | <b>13.27</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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         | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |               | 0.0119        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0119</b> |

**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         | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |               | 0.0119        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0119</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/4/2022   | 11/10/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 2/4/2022   | 2/17/2022  | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/1/2022  | 11/14/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 76,653; Non-Residential Outdoor: 25,551; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets           | 1      | 8.00        | 84          | 0.74        |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Demolition            | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 21.00              | 8.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 232.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - School - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 2.5151        | 0.0000        | 2.5151        | 0.3808         | 0.0000        | 0.3808        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>2.5151</b> | <b>0.8379</b> | <b>3.3530</b> | <b>0.3808</b>  | <b>0.7829</b> | <b>1.1637</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0540        | 1.9482        | 0.4543        | 7.2100e-003        | 0.2030        | 0.0145        | 0.2175        | 0.0557         | 0.0139        | 0.0695        |          | 789.6997        | 789.6997        | 0.0419        | 0.1253        | 828.0865        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003   | 2.5900e-003   | 100.8837        |
| <b>Total</b> | <b>0.0918</b> | <b>1.9740</b> | <b>0.8463</b> | <b>8.1900e-003</b> | <b>0.3098</b> | <b>0.0152</b> | <b>0.3250</b> | <b>0.0840</b>  | <b>0.0145</b> | <b>0.0985</b> |          | <b>889.7328</b> | <b>889.7328</b> | <b>0.0450</b> | <b>0.1279</b> | <b>928.9702</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.1318        | 0.0000        | 1.1318        | 0.1714         | 0.0000        | 0.1714        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.1318</b> | <b>0.0375</b> | <b>1.1693</b> | <b>0.1714</b>  | <b>0.0375</b> | <b>0.2089</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0540        | 1.9482        | 0.4543        | 7.2100e-003        | 0.2030        | 0.0145        | 0.2175        | 0.0557         | 0.0139        | 0.0695        |          | 789.6997        | 789.6997        | 0.0419        | 0.1253        | 828.0865        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003   | 2.5900e-003   | 100.8837        |
| <b>Total</b> | <b>0.0918</b> | <b>1.9740</b> | <b>0.8463</b> | <b>8.1900e-003</b> | <b>0.3098</b> | <b>0.0152</b> | <b>0.3250</b> | <b>0.0840</b>  | <b>0.0145</b> | <b>0.0985</b> |          | <b>889.7328</b> | <b>889.7328</b> | <b>0.0450</b> | <b>0.1279</b> | <b>928.9702</b> |



## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0290        | 0.0198        | 0.3016        | 7.6000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 76.9485        | 76.9485        | 2.3800e-003        | 2.0000e-003        | 77.6028        |
| <b>Total</b> | <b>0.0290</b> | <b>0.0198</b> | <b>0.3016</b> | <b>7.6000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>76.9485</b> | <b>76.9485</b> | <b>2.3800e-003</b> | <b>2.0000e-003</b> | <b>77.6028</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0163        | 0.4092        | 0.1381        | 1.6500e-003        | 0.0542        | 3.9400e-003        | 0.0581        | 0.0156         | 3.7700e-003        | 0.0194        |          | 177.3539        | 177.3539        | 5.9300e-003   | 0.0256        | 185.1145        |
| Worker       | 0.0609        | 0.0416        | 0.6333        | 1.5900e-003        | 0.1725        | 1.1300e-003        | 0.1736        | 0.0458         | 1.0400e-003        | 0.0468        |          | 161.5919        | 161.5919        | 5.0100e-003   | 4.1900e-003   | 162.9660        |
| <b>Total</b> | <b>0.0773</b> | <b>0.4509</b> | <b>0.7714</b> | <b>3.2400e-003</b> | <b>0.2267</b> | <b>5.0700e-003</b> | <b>0.2318</b> | <b>0.0614</b>  | <b>4.8100e-003</b> | <b>0.0662</b> |          | <b>338.9458</b> | <b>338.9458</b> | <b>0.0109</b> | <b>0.0297</b> | <b>348.0805</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0163        | 0.4092        | 0.1381        | 1.6500e-003        | 0.0542        | 3.9400e-003        | 0.0581        | 0.0156         | 3.7700e-003        | 0.0194        |          | 177.3539        | 177.3539        | 5.9300e-003   | 0.0256        | 185.1145        |
| Worker       | 0.0609        | 0.0416        | 0.6333        | 1.5900e-003        | 0.1725        | 1.1300e-003        | 0.1736        | 0.0458         | 1.0400e-003        | 0.0468        |          | 161.5919        | 161.5919        | 5.0100e-003   | 4.1900e-003   | 162.9660        |
| <b>Total</b> | <b>0.0773</b> | <b>0.4509</b> | <b>0.7714</b> | <b>3.2400e-003</b> | <b>0.2267</b> | <b>5.0700e-003</b> | <b>0.2318</b> | <b>0.0614</b>  | <b>4.8100e-003</b> | <b>0.0662</b> |          | <b>338.9458</b> | <b>338.9458</b> | <b>0.0109</b> | <b>0.0297</b> | <b>348.0805</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0377        | 0.0258        | 0.3921        | 9.8000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 100.0331        | 100.0331        | 3.1000e-003        | 2.5900e-003        | 100.8837        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0258</b> | <b>0.3921</b> | <b>9.8000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>100.0331</b> | <b>100.0331</b> | <b>3.1000e-003</b> | <b>2.5900e-003</b> | <b>100.8837</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 35.5287        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>35.7332</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 35.5287        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>35.5584</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |



## Palmdale GPU - School - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| Land Use          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------|-------------------------|----------|--------|-------------|------------|
|                   | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Elementary School | 0.00                    | 0.00     | 0.00   |             |            |
| Total             | 0.00                    | 0.00     | 0.00   |             |            |

## 4.3 Trip Type Information

| Land Use          | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Elementary School | 9.50       | 7.30       | 7.30        | 65.00      | 30.00      | 5.00        | 63             | 25       | 12      |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

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

|                   |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Elementary School | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Elementary School | 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        |
| <b>Total</b>      |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

Mitigated

|                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use          | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Elementary School | 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        |
| <b>Total</b>      |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## 6.0 Area Detail

## 6.1 Mitigation Measures Area

Palmdale GPU - School - Los Angeles-Mojave Desert 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   | 4.8000e-004 | 5.0000e-005 | 5.2200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0112    | 0.0112    | 3.0000e-005 |     | 0.0119 |
| Unmitigated | 4.8000e-004 | 5.0000e-005 | 5.2200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0112    | 0.0112    | 3.0000e-005 |     | 0.0119 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |     | 0.0119        |
| <b>Total</b>          | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> |     | <b>0.0119</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |     | 0.0119        |
| <b>Total</b>          | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> |     | <b>0.0119</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Summer

**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**

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## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - School  
Los Angeles-Mojave Desert County, Winter****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses         | Size  | Metric   | Lot Acreage | Floor Surface Area | Population |
|-------------------|-------|----------|-------------|--------------------|------------|
| Elementary School | 51.10 | 1000sqft | 1.17        | 51,102.00          | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition -

Architectural Coating - Based on AVAQMD requirements for VOC content

Vehicle Trips - Operational Emissions Modeled Separately

Consumer Products - Operational Emissions Modeled Separately

Area Coating - Operational Emissions Modeled Separately

Landscape Equipment - Operational Emissions Modeled Separately

Energy Use - Operational Emissions Modeled Separately

Water And Wastewater - Operational Emissions Modeled Separately





Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

|                         |                              |              |              |
|-------------------------|------------------------------|--------------|--------------|
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change    | Tier 4 Final |
| tblConstructionPhase    | PhaseEndDate                 | 12/8/2022    | 11/14/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 11/24/2022   | 2/17/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/25/2022   | 11/1/2022    |
| tblConstructionPhase    | PhaseStartDate               | 11/11/2022   | 2/4/2022     |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05     | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07    | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08    | 0            |
| tblEnergyUse            | LightingElect                | 2.59         | 0.00         |
| tblEnergyUse            | NT24E                        | 1.59         | 0.00         |
| tblEnergyUse            | NT24NG                       | 1.08         | 0.00         |
| tblEnergyUse            | T24E                         | 1.56         | 0.00         |
| tblEnergyUse            | T24NG                        | 9.23         | 0.00         |
| tblLandscapeEquipment   | NumberSummerDays             | 180          | 0            |
| tblSolidWaste           | SolidWasteGenerationRate     | 66.43        | 0.00         |
| tblVehicleTrips         | WD_TR                        | 19.52        | 0.00         |
| tblWater                | IndoorWaterUseRate           | 1,481,742.47 | 0.00         |
| tblWater                | OutdoorWaterUseRate          | 3,810,194.92 | 0.00         |

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

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

Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

|                |                |                |                |               | PM10          | PM10          | Total         | PM2.5         | PM2.5         | Total         |               |                   |                   |               |               |                   |
|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |                |                |               |               |               |               |               |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 37.4746        | 19.7773        | 22.6279        | 0.0397        | 7.1647        | 0.9421        | 7.9076        | 3.4465        | 0.8948        | 4.1299        | 0.0000        | 3,724.2085        | 3,724.2085        | 0.7741        | 0.1281        | 3,753.3443        |
| <b>Maximum</b> | <b>37.4746</b> | <b>19.7773</b> | <b>22.6279</b> | <b>0.0397</b> | <b>7.1647</b> | <b>0.9421</b> | <b>7.9076</b> | <b>3.4465</b> | <b>0.8948</b> | <b>4.1299</b> | <b>0.0000</b> | <b>3,724.2085</b> | <b>3,724.2085</b> | <b>0.7741</b> | <b>0.1281</b> | <b>3,753.3443</b> |

**Mitigated Construction**

|                | ROG            | NOx           | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day         |               |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 35.7469        | 3.2737        | 15.5449        | 0.0323        | 3.2693        | 0.0527        | 3.3035        | 1.5629         | 0.0520        | 1.5970        | 0.0000        | 3,208.1217        | 3,208.1217        | 0.6661        | 0.1281        | 3,262.2269        |
| <b>Maximum</b> | <b>35.7469</b> | <b>3.2737</b> | <b>15.5449</b> | <b>0.0323</b> | <b>3.2693</b> | <b>0.0527</b> | <b>3.3035</b> | <b>1.5629</b>  | <b>0.0520</b> | <b>1.5970</b> | <b>0.0000</b> | <b>3,208.1217</b> | <b>3,208.1217</b> | <b>0.6661</b> | <b>0.1281</b> | <b>3,262.2269</b> |

|                          | ROG         | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio-CO2     | Total CO2    | CH4          | N2O         | CO2e         |
|--------------------------|-------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>4.61</b> | <b>83.45</b> | <b>31.30</b> | <b>18.68</b> | <b>54.37</b>  | <b>94.41</b> | <b>58.22</b> | <b>54.65</b>   | <b>94.19</b>  | <b>61.33</b> | <b>0.00</b> | <b>13.86</b> | <b>13.86</b> | <b>13.95</b> | <b>0.00</b> | <b>13.08</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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         | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |               | 0.0119        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0119</b> |

**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         | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |               | 0.0119        |
| Energy       | 0.0000             | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-005</b> | <b>2.0000e-005</b> | <b>0.0000</b>  | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>0.0119</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/28/2022  | 5             | 20       |                   |
| 2            | Grading               | Grading               | 1/29/2022  | 2/3/2022   | 5             | 4        |                   |
| 3            | Building Construction | Building Construction | 2/4/2022   | 11/10/2022 | 5             | 200      |                   |
| 4            | Paving                | Paving                | 2/4/2022   | 2/17/2022  | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 11/1/2022  | 11/14/2022 | 5             | 10       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 4****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 76,653; Non-Residential Outdoor: 25,551; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Paving                | Cement and Mortar Mixers | 1      | 6.00        | 9           | 0.56        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 6.00        | 231         | 0.29        |
| Building Construction | Forklifts                | 1      | 6.00        | 89          | 0.20        |
| Building Construction | Generator Sets           | 1      | 8.00        | 84          | 0.74        |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Demolition            | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| Paving                | Pavers                    | 1 | 6.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 1 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 1 | 7.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Paving                | Tractors/Loaders/Backhoes | 1 | 8.00 | 97  | 0.37 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Building Construction | Welders                   | 3 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 7                       | 21.00              | 8.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Demolition            | 5                       | 13.00              | 0.00               | 232.00              | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 4                       | 10.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 5                       | 13.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - School - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 2.5151        | 0.0000        | 2.5151        | 0.3808         | 0.0000        | 0.3808        |          |                   | 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        |
| <b>Total</b>  | <b>1.6889</b> | <b>16.6217</b> | <b>13.9605</b> | <b>0.0241</b> | <b>2.5151</b> | <b>0.8379</b> | <b>3.3530</b> | <b>0.3808</b>  | <b>0.7829</b> | <b>1.1637</b> |          | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0528        | 2.0273        | 0.4622        | 7.2100e-003        | 0.2030        | 0.0145        | 0.2176        | 0.0557         | 0.0139        | 0.0695        |          | 789.9312        | 789.9312        | 0.0419        | 0.1253        | 828.3285        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737         | 94.7737         | 3.1900e-003   | 2.7700e-003   | 95.6794         |
| <b>Total</b> | <b>0.0926</b> | <b>2.0557</b> | <b>0.8265</b> | <b>8.1400e-003</b> | <b>0.3098</b> | <b>0.0152</b> | <b>0.3250</b> | <b>0.0840</b>  | <b>0.0145</b> | <b>0.0985</b> |          | <b>884.7049</b> | <b>884.7049</b> | <b>0.0451</b> | <b>0.1281</b> | <b>924.0079</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 1.1318        | 0.0000        | 1.1318        | 0.1714         | 0.0000        | 0.1714        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2811        | 1.2179        | 14.7184        | 0.0241        |               | 0.0375        | 0.0375        |                | 0.0375        | 0.0375        | 0.0000        | 2,323.4168        | 2,323.4168        | 0.5921        |     | 2,338.2191        |
| <b>Total</b>  | <b>0.2811</b> | <b>1.2179</b> | <b>14.7184</b> | <b>0.0241</b> | <b>1.1318</b> | <b>0.0375</b> | <b>1.1693</b> | <b>0.1714</b>  | <b>0.0375</b> | <b>0.2089</b> | <b>0.0000</b> | <b>2,323.4168</b> | <b>2,323.4168</b> | <b>0.5921</b> |     | <b>2,338.2191</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0528        | 2.0273        | 0.4622        | 7.2100e-003        | 0.2030        | 0.0145        | 0.2176        | 0.0557         | 0.0139        | 0.0695        |          | 789.9312        | 789.9312        | 0.0419        | 0.1253        | 828.3285        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004   | 0.1075        | 0.0283         | 6.5000e-004   | 0.0290        |          | 94.7737         | 94.7737         | 3.1900e-003   | 2.7700e-003   | 95.6794         |
| <b>Total</b> | <b>0.0926</b> | <b>2.0557</b> | <b>0.8265</b> | <b>8.1400e-003</b> | <b>0.3098</b> | <b>0.0152</b> | <b>0.3250</b> | <b>0.0840</b>  | <b>0.0145</b> | <b>0.0985</b> |          | <b>884.7049</b> | <b>884.7049</b> | <b>0.0451</b> | <b>0.1281</b> | <b>924.0079</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |               |               | 7.0826        | 0.0000        | 7.0826        | 3.4247         | 0.0000        | 3.4247        |          |                   | 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        |
| <b>Total</b>  | <b>1.5403</b> | <b>16.9836</b> | <b>9.2202</b> | <b>0.0206</b> | <b>7.0826</b> | <b>0.7423</b> | <b>7.8249</b> | <b>3.4247</b>  | <b>0.6829</b> | <b>4.1076</b> |          | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |



## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 3.1872        | 0.0000        | 3.1872        | 1.5411         | 0.0000        | 1.5411        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.2522        | 1.0927        | 10.9071        | 0.0206        |               | 0.0336        | 0.0336        |                | 0.0336        | 0.0336        | 0.0000        | 1,995.4825        | 1,995.4825        | 0.6454        |     | 2,011.6169        |
| <b>Total</b>  | <b>0.2522</b> | <b>1.0927</b> | <b>10.9071</b> | <b>0.0206</b> | <b>3.1872</b> | <b>0.0336</b> | <b>3.2208</b> | <b>1.5411</b>  | <b>0.0336</b> | <b>1.5748</b> | <b>0.0000</b> | <b>1,995.4825</b> | <b>1,995.4825</b> | <b>0.6454</b> |     | <b>2,011.6169</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0306        | 0.0219        | 0.2802        | 7.2000e-004        | 0.0822        | 5.4000e-004        | 0.0827        | 0.0218         | 5.0000e-004        | 0.0223        |          | 72.9029        | 72.9029        | 2.4500e-003        | 2.1300e-003        | 73.5996        |
| <b>Total</b> | <b>0.0306</b> | <b>0.0219</b> | <b>0.2802</b> | <b>7.2000e-004</b> | <b>0.0822</b> | <b>5.4000e-004</b> | <b>0.0827</b> | <b>0.0218</b>  | <b>5.0000e-004</b> | <b>0.0223</b> |          | <b>72.9029</b> | <b>72.9029</b> | <b>2.4500e-003</b> | <b>2.1300e-003</b> | <b>73.5996</b> |

Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

**3.4 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     | 1.6487        | 12.5031        | 12.7264        | 0.0221        |               | 0.5889        | 0.5889        |                | 0.5689        | 0.5689        |          | 2,001.5429        | 2,001.5429        | 0.3486        |     | 2,010.2581        |
| <b>Total</b> | <b>1.6487</b> | <b>12.5031</b> | <b>12.7264</b> | <b>0.0221</b> |               | <b>0.5889</b> | <b>0.5889</b> |                | <b>0.5689</b> | <b>0.5689</b> |          | <b>2,001.5429</b> | <b>2,001.5429</b> | <b>0.3486</b> |     | <b>2,010.2581</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0162        | 0.4261        | 0.1427        | 1.6500e-003        | 0.0542        | 3.9600e-003        | 0.0582        | 0.0156         | 3.7900e-003        | 0.0194        |          | 177.4171        | 177.4171        | 5.9100e-003   | 0.0256        | 185.1869        |
| Worker       | 0.0643        | 0.0460        | 0.5885        | 1.5000e-003        | 0.1725        | 1.1300e-003        | 0.1736        | 0.0458         | 1.0400e-003        | 0.0468        |          | 153.0960        | 153.0960        | 5.1500e-003   | 4.4800e-003   | 154.5590        |
| <b>Total</b> | <b>0.0805</b> | <b>0.4720</b> | <b>0.7312</b> | <b>3.1500e-003</b> | <b>0.2267</b> | <b>5.0900e-003</b> | <b>0.2318</b> | <b>0.0614</b>  | <b>4.8300e-003</b> | <b>0.0662</b> |          | <b>330.5131</b> | <b>330.5131</b> | <b>0.0111</b> | <b>0.0301</b> | <b>339.7460</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.0958        | 0.4150        | 4.5772        | 7.8100e-003        |               | 0.0128        | 0.0128        |                | 0.0128        | 0.0128        | 0.0000        | 756.0751        | 756.0751        | 0.2445        |     | 762.1884        |
| <b>Total</b> | <b>0.0958</b> | <b>0.4150</b> | <b>4.5772</b> | <b>7.8100e-003</b> |               | <b>0.0128</b> | <b>0.0128</b> |                | <b>0.0128</b> | <b>0.0128</b> | <b>0.0000</b> | <b>756.0751</b> | <b>756.0751</b> | <b>0.2445</b> |     | <b>762.1884</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Vendor       | 0.0162        | 0.4261        | 0.1427        | 1.6500e-003        | 0.0542        | 3.9600e-003        | 0.0582        | 0.0156         | 3.7900e-003        | 0.0194        |          | 177.4171        | 177.4171        | 5.9100e-003   | 0.0256        | 185.1869        |
| Worker       | 0.0643        | 0.0460        | 0.5885        | 1.5000e-003        | 0.1725        | 1.1300e-003        | 0.1736        | 0.0458         | 1.0400e-003        | 0.0468        |          | 153.0960        | 153.0960        | 5.1500e-003   | 4.4800e-003   | 154.5590        |
| <b>Total</b> | <b>0.0805</b> | <b>0.4720</b> | <b>0.7312</b> | <b>3.1500e-003</b> | <b>0.2267</b> | <b>5.0900e-003</b> | <b>0.2318</b> | <b>0.0614</b>  | <b>4.8300e-003</b> | <b>0.0662</b> |          | <b>330.5131</b> | <b>330.5131</b> | <b>0.0111</b> | <b>0.0301</b> | <b>339.7460</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 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     | 0.6877        | 6.7738        | 8.8060        | 0.0135        |               | 0.3474        | 0.3474        |                | 0.3205        | 0.3205        |          | 1,297.3789        | 1,297.3789        | 0.4113        |     | 1,307.6608        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.6877</b> | <b>6.7738</b> | <b>8.8060</b> | <b>0.0135</b> |               | <b>0.3474</b> | <b>0.3474</b> |                | <b>0.3205</b> | <b>0.3205</b> |          | <b>1,297.3789</b> | <b>1,297.3789</b> | <b>0.4113</b> |     | <b>1,307.6608</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.1598        | 0.6922        | 9.8512        | 0.0130        |               | 0.0213        | 0.0213        |                | 0.0213        | 0.0213        | 0.0000        | 1,259.4916        | 1,259.4916        | 0.4074        |     | 1,269.6753        |
| Paving       | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.1598</b> | <b>0.6922</b> | <b>9.8512</b> | <b>0.0130</b> |               | <b>0.0213</b> | <b>0.0213</b> |                | <b>0.0213</b> | <b>0.0213</b> | <b>0.0000</b> | <b>1,259.4916</b> | <b>1,259.4916</b> | <b>0.4074</b> |     | <b>1,269.6753</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0398        | 0.0285        | 0.3643        | 9.3000e-004        | 0.1068        | 7.0000e-004        | 0.1075        | 0.0283         | 6.5000e-004        | 0.0290        |          | 94.7737        | 94.7737        | 3.1900e-003        | 2.7700e-003        | 95.6794        |
| <b>Total</b> | <b>0.0398</b> | <b>0.0285</b> | <b>0.3643</b> | <b>9.3000e-004</b> | <b>0.1068</b> | <b>7.0000e-004</b> | <b>0.1075</b> | <b>0.0283</b>  | <b>6.5000e-004</b> | <b>0.0290</b> |          | <b>94.7737</b> | <b>94.7737</b> | <b>3.1900e-003</b> | <b>2.7700e-003</b> | <b>95.6794</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 35.5287        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>35.7332</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 35.5287        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>35.5584</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

Palmdale GPU - School - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

**4.2 Trip Summary Information**

| Land Use          | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------------|-------------------------|----------|--------|-------------|------------|
|                   | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Elementary School | 0.00                    | 0.00     | 0.00   |             |            |
| Total             | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use          | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                   | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Elementary School | 9.50       | 7.30       | 7.30        | 65.00      | 30.00      | 5.00        | 63             | 25       | 12      |

**4.4 Fleet Mix**

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|



Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

|                   |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Elementary School | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Palmdale GPU - School - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Elementary School | 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        |
| <b>Total</b>      |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                   | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use          | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Elementary School | 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        |
| <b>Total</b>      |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail****6.1 Mitigation Measures Area**

Palmdale GPU - School - Los Angeles-Mojave Desert 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   | 4.8000e-004 | 5.0000e-005 | 5.2200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0112    | 0.0112    | 3.0000e-005 |     | 0.0119 |
| Unmitigated | 4.8000e-004 | 5.0000e-005 | 5.2200e-003 | 0.0000 |               | 2.0000e-005  | 2.0000e-005 |                | 2.0000e-005   | 2.0000e-005 |          | 0.0112    | 0.0112    | 3.0000e-005 |     | 0.0119 |

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |     | 0.0119        |
| <b>Total</b>          | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> |     | <b>0.0119</b> |

Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

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

**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 | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Consumer Products     | 0.0000             |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |               | 0.0000        |                    |     | 0.0000        |
| Landscaping           | 4.8000e-004        | 5.0000e-005        | 5.2200e-003        | 0.0000        |               | 2.0000e-005        | 2.0000e-005        |                | 2.0000e-005        | 2.0000e-005        |          | 0.0112        | 0.0112        | 3.0000e-005        |     | 0.0119        |
| <b>Total</b>          | <b>4.8000e-004</b> | <b>5.0000e-005</b> | <b>5.2200e-003</b> | <b>0.0000</b> |               | <b>2.0000e-005</b> | <b>2.0000e-005</b> |                | <b>2.0000e-005</b> | <b>2.0000e-005</b> |          | <b>0.0112</b> | <b>0.0112</b> | <b>3.0000e-005</b> |     | <b>0.0119</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

## Palmdale GPU - School - Los Angeles-Mojave Desert County, Winter

**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**

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## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - SFR Annual Construction****Los Angeles-Mojave Desert County, Annual****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses             | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------|-------|---------------|-------------|--------------------|------------|
| Single Family Housing | 56.00 | Dwelling Unit | 18.18       | 100,800.00         | 193        |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational modeled separately

Woodstoves - Operational modeled separately

Consumer Products - Operational modeled separately

Area Coating - Operational modeled separately

Landscape Equipment - Operational modeled separately

Energy Use - Operational modeled separately

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

Water And Wastewater - Operational modeled separately

Solid Waste - Operational modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering exposed area based on AVAQMD regulations for dust suppression and is not mitigated scenario.

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | NumDays                      | 20.00     | 10.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1,608.84  | 0.00         |
| tblEnergyUse            | NT24E                        | 6,155.97  | 0.00         |



Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

|                       |                          |              |        |
|-----------------------|--------------------------|--------------|--------|
| tblEnergyUse          | NT24NG                   | 6,384.00     | 0.00   |
| tblEnergyUse          | T24E                     | 93.13        | 0.00   |
| tblEnergyUse          | T24NG                    | 19,108.08    | 0.00   |
| tblFireplaces         | FireplaceDayYear         | 82.00        | 0.00   |
| tblFireplaces         | FireplaceHourDay         | 3.00         | 0.00   |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40     | 0.00   |
| tblFireplaces         | NumberGas                | 30.80        | 0.00   |
| tblFireplaces         | NumberNoFireplace        | 5.60         | 0.00   |
| tblFireplaces         | NumberWood               | 19.60        | 0.00   |
| tblLandscapeEquipment | NumberSummerDays         | 180          | 0      |
| tblLandUse            | Population               | 160.00       | 193.00 |
| tblSolidWaste         | SolidWasteGenerationRate | 79.13        | 0.00   |
| tblVehicleTrips       | ST_TR                    | 9.54         | 0.00   |
| tblVehicleTrips       | SU_TR                    | 8.55         | 0.00   |
| tblVehicleTrips       | WD_TR                    | 9.44         | 0.00   |
| tblWater              | IndoorWaterUseRate       | 3,648,625.43 | 0.00   |
| tblWater              | OutdoorWaterUseRate      | 2,300,220.38 | 0.00   |
| tblWoodstoves         | NumberCatalytic          | 2.80         | 0.00   |
| tblWoodstoves         | NumberNoncatalytic       | 2.80         | 0.00   |
| tblWoodstoves         | WoodstoveDayYear         | 82.00        | 0.00   |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20     | 0.00   |

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

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

Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

|                |               |               |               |                    | PM10          | PM10          | Total         | PM2.5         | PM2.5         | Total         |               |                 |                 |               |                    |                 |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |               |               |               |               |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.7397        | 2.4802        | 2.4796        | 4.4800e-003        | 0.1368        | 0.1217        | 0.2585        | 0.0487        | 0.1140        | 0.1628        | 0.0000        | 390.3820        | 390.3820        | 0.0930        | 2.8700e-003        | 393.5624        |
| <b>Maximum</b> | <b>0.7397</b> | <b>2.4802</b> | <b>2.4796</b> | <b>4.4800e-003</b> | <b>0.1368</b> | <b>0.1217</b> | <b>0.2585</b> | <b>0.0487</b> | <b>0.1140</b> | <b>0.1628</b> | <b>0.0000</b> | <b>390.3820</b> | <b>390.3820</b> | <b>0.0930</b> | <b>2.8700e-003</b> | <b>393.5624</b> |

**Mitigated Construction**

|                | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O                | CO2e            |
|----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|--------------------|-----------------|
| Year           | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                 |                 |               |                    |                 |
| 2022           | 0.5201        | 0.2133        | 2.0601        | 3.4600e-003        | 0.0763        | 5.5800e-003        | 0.0819        | 0.0259         | 5.5500e-003        | 0.0315        | 0.0000        | 306.3745        | 306.3745        | 0.0875        | 2.8700e-003        | 309.4172        |
| <b>Maximum</b> | <b>0.5201</b> | <b>0.2133</b> | <b>2.0601</b> | <b>3.4600e-003</b> | <b>0.0763</b> | <b>5.5800e-003</b> | <b>0.0819</b> | <b>0.0259</b>  | <b>5.5500e-003</b> | <b>0.0315</b> | <b>0.0000</b> | <b>306.3745</b> | <b>306.3745</b> | <b>0.0875</b> | <b>2.8700e-003</b> | <b>309.4172</b> |

|                          | ROG          | NOx          | CO           | SO2          | Fugitive PM10 | Exhaust PM10 | PM10 Total   | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total  | Bio- CO2    | NBio- CO2    | Total CO2    | CH4         | N2O         | CO2e         |
|--------------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|--------------|--------------|-------------|-------------|--------------|
| <b>Percent Reduction</b> | <b>29.69</b> | <b>91.40</b> | <b>16.92</b> | <b>22.77</b> | <b>44.26</b>  | <b>95.41</b> | <b>68.34</b> | <b>46.86</b>   | <b>95.13</b>  | <b>80.68</b> | <b>0.00</b> | <b>21.52</b> | <b>21.52</b> | <b>5.91</b> | <b>0.00</b> | <b>21.38</b> |

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



Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

**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         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Waste        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Water        |               |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b>  | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

|                          | ROG         | NOx         | CO          | SO2         | Fugitive PM10 | Exhaust PM10 | PM10 Total  | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2    | NBio-CO2    | Total CO2   | CH4         | N2O         | CO2e        |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Percent Reduction</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b>   | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>    | <b>0.00</b>   | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> |

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition            | Demolition            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

|   |                       |                       |           |            |   |    |
|---|-----------------------|-----------------------|-----------|------------|---|----|
| 4 | Paving                | Paving                | 2/23/2022 | 3/8/2022   | 5 | 10 |
| 5 | Architectural Coating | Architectural Coating | 12/5/2022 | 12/30/2022 | 5 | 20 |

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

**Acres of Grading (Grading Phase): 66**

**Acres of Paving: 0**

**Residential Indoor: 204,120; Residential Outdoor: 68,040; 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 |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors           | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws  | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                    | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators                | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                 | 3      | 8.00        | 89          | 0.20        |
| Building Construction | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Grading               | Graders                   | 1      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Demolition            | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Grading               | Rubber Tired Dozers       | 1      | 8.00        | 247         | 0.40        |
| Grading               | Scrapers                  | 2      | 8.00        | 367         | 0.48        |
| Building Construction | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Grading               | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Building Construction | Welders                   | 1      | 8.00        | 46          | 0.45        |

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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            | 6                       | 15.00              | 0.00               | 82.00               | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 20.00              | 6.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**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 |               |               |               |                    | 8.8600e-003        | 0.0000             | 8.8600e-003   | 1.3400e-003        | 0.0000             | 1.3400e-003        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0198        | 0.1929        | 0.1545        | 2.9000e-004        |                    | 9.3200e-003        | 9.3200e-003   |                    | 8.6600e-003        | 8.6600e-003        | 0.0000        | 25.4927        | 25.4927        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>0.0198</b> | <b>0.1929</b> | <b>0.1545</b> | <b>2.9000e-004</b> | <b>8.8600e-003</b> | <b>9.3200e-003</b> | <b>0.0182</b> | <b>1.3400e-003</b> | <b>8.6600e-003</b> | <b>1.0000e-002</b> | <b>0.0000</b> | <b>25.4927</b> | <b>25.4927</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 1.9000e-004        | 7.2500e-003        | 1.6200e-003        | 3.0000e-005        | 7.1000e-004        | 5.0000e-005        | 7.6000e-004        | 1.9000e-004        | 5.0000e-005        | 2.4000e-004        | 0.0000        | 2.5324        | 2.5324        | 1.3000e-004        | 4.0000e-004        | 2.6555        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.2000e-004        | 2.5000e-004        | 3.2300e-003        | 1.0000e-005        | 9.1000e-004        | 1.0000e-005        | 9.1000e-004        | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7551        | 0.7551        | 2.0000e-005        | 2.0000e-005        | 0.7623        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>7.5000e-003</b> | <b>4.8500e-003</b> | <b>4.0000e-005</b> | <b>1.6200e-003</b> | <b>6.0000e-005</b> | <b>1.6700e-003</b> | <b>4.3000e-004</b> | <b>6.0000e-005</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>3.2875</b> | <b>3.2875</b> | <b>1.5000e-004</b> | <b>4.2000e-004</b> | <b>3.4178</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |                    |                    |                    |                    |                    |                    | MT/yr         |                |                |                    |               |                |
| Fugitive Dust |                    |               |               |                    | 3.9900e-003        | 0.0000             | 3.9900e-003        | 6.0000e-004        | 0.0000             | 6.0000e-004        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 3.4700e-003        | 0.0150        | 0.1746        | 2.9000e-004        |                    | 4.6000e-004        | 4.6000e-004        |                    | 4.6000e-004        | 4.6000e-004        | 0.0000        | 25.4926        | 25.4926        | 7.1600e-003        | 0.0000        | 25.6717        |
| <b>Total</b>  | <b>3.4700e-003</b> | <b>0.0150</b> | <b>0.1746</b> | <b>2.9000e-004</b> | <b>3.9900e-003</b> | <b>4.6000e-004</b> | <b>4.4500e-003</b> | <b>6.0000e-004</b> | <b>4.6000e-004</b> | <b>1.0600e-003</b> | <b>0.0000</b> | <b>25.4926</b> | <b>25.4926</b> | <b>7.1600e-003</b> | <b>0.0000</b> | <b>25.6717</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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      | 1.9000e-004        | 7.2500e-003        | 1.6200e-003        | 3.0000e-005        | 7.1000e-004        | 5.0000e-005        | 7.6000e-004        | 1.9000e-004        | 5.0000e-005        | 2.4000e-004        | 0.0000        | 2.5324        | 2.5324        | 1.3000e-004        | 4.0000e-004        | 2.6555        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 3.2000e-004        | 2.5000e-004        | 3.2300e-003        | 1.0000e-005        | 9.1000e-004        | 1.0000e-005        | 9.1000e-004        | 2.4000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000        | 0.7551        | 0.7551        | 2.0000e-005        | 2.0000e-005        | 0.7623        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>7.5000e-003</b> | <b>4.8500e-003</b> | <b>4.0000e-005</b> | <b>1.6200e-003</b> | <b>6.0000e-005</b> | <b>1.6700e-003</b> | <b>4.3000e-004</b> | <b>6.0000e-005</b> | <b>4.9000e-004</b> | <b>0.0000</b> | <b>3.2875</b> | <b>3.2875</b> | <b>1.5000e-004</b> | <b>4.2000e-004</b> | <b>3.4178</b> |

**3.3 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 |               |               |               |                    | 0.1012        | 0.0000        | 0.1012        | 0.0402         | 0.0000        | 0.0402        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 0.0399        | 0.4273        | 0.3195        | 6.8000e-004        |               | 0.0180        | 0.0180        |                | 0.0166        | 0.0166        | 0.0000        | 59.9881        | 59.9881        | 0.0194        | 0.0000        | 60.4731        |
| <b>Total</b>  | <b>0.0399</b> | <b>0.4273</b> | <b>0.3195</b> | <b>6.8000e-004</b> | <b>0.1012</b> | <b>0.0180</b> | <b>0.1192</b> | <b>0.0402</b>  | <b>0.0166</b> | <b>0.0567</b> | <b>0.0000</b> | <b>59.9881</b> | <b>59.9881</b> | <b>0.0194</b> | <b>0.0000</b> | <b>60.4731</b> |



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|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.3000e-004        | 4.9000e-004        | 6.3100e-003        | 2.0000e-005        | 1.7700e-003        | 1.0000e-005        | 1.7800e-003        | 4.7000e-004        | 1.0000e-005        | 4.8000e-004        | 0.0000        | 1.4767        | 1.4767        | 5.0000e-005        | 4.0000e-005        | 1.4907        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>4.9000e-004</b> | <b>6.3100e-003</b> | <b>2.0000e-005</b> | <b>1.7700e-003</b> | <b>1.0000e-005</b> | <b>1.7800e-003</b> | <b>4.7000e-004</b> | <b>1.0000e-005</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>1.4767</b> | <b>1.4767</b> | <b>5.0000e-005</b> | <b>4.0000e-005</b> | <b>1.4907</b> |

**Mitigated Construction On-Site**

|               | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category      | tons/yr            |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |               |               |                |
| Fugitive Dust |                    |               |               |                    | 0.0456        | 0.0000             | 0.0456        | 0.0181         | 0.0000             | 0.0181        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| Off-Road      | 8.3800e-003        | 0.0363        | 0.3630        | 6.8000e-004        |               | 1.1200e-003        | 1.1200e-003   |                | 1.1200e-003        | 1.1200e-003   | 0.0000        | 59.9880        | 59.9880        | 0.0194        | 0.0000        | 60.4730        |
| <b>Total</b>  | <b>8.3800e-003</b> | <b>0.0363</b> | <b>0.3630</b> | <b>6.8000e-004</b> | <b>0.0456</b> | <b>1.1200e-003</b> | <b>0.0467</b> | <b>0.0181</b>  | <b>1.1200e-003</b> | <b>0.0192</b> | <b>0.0000</b> | <b>59.9880</b> | <b>59.9880</b> | <b>0.0194</b> | <b>0.0000</b> | <b>60.4730</b> |

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

**Mitigated Construction Off-Site**

|              | ROG                | NOx                | CO                 | SO2                | Fugitive PM10      | Exhaust PM10       | PM10 Total         | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O                | CO2e          |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|--------------------|---------------|
| Category     | tons/yr            |                    |                    |                    |                    |                    |                    |                    |                    |                    | MT/yr         |               |               |                    |                    |               |
| Hauling      | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Vendor       | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        |
| Worker       | 6.3000e-004        | 4.9000e-004        | 6.3100e-003        | 2.0000e-005        | 1.7700e-003        | 1.0000e-005        | 1.7800e-003        | 4.7000e-004        | 1.0000e-005        | 4.8000e-004        | 0.0000        | 1.4767        | 1.4767        | 5.0000e-005        | 4.0000e-005        | 1.4907        |
| <b>Total</b> | <b>6.3000e-004</b> | <b>4.9000e-004</b> | <b>6.3100e-003</b> | <b>2.0000e-005</b> | <b>1.7700e-003</b> | <b>1.0000e-005</b> | <b>1.7800e-003</b> | <b>4.7000e-004</b> | <b>1.0000e-005</b> | <b>4.8000e-004</b> | <b>0.0000</b> | <b>1.4767</b> | <b>1.4767</b> | <b>5.0000e-005</b> | <b>4.0000e-005</b> | <b>1.4907</b> |

**3.4 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     | 0.1903        | 1.7411        | 1.8245        | 3.0000e-003        |               | 0.0902        | 0.0902        |                | 0.0849        | 0.0849        | 0.0000        | 258.3737        | 258.3737        | 0.0619        | 0.0000        | 259.9211        |
| <b>Total</b> | <b>0.1903</b> | <b>1.7411</b> | <b>1.8245</b> | <b>3.0000e-003</b> |               | <b>0.0902</b> | <b>0.0902</b> |                | <b>0.0849</b> | <b>0.0849</b> | <b>0.0000</b> | <b>258.3737</b> | <b>258.3737</b> | <b>0.0619</b> | <b>0.0000</b> | <b>259.9211</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.3600e-003        | 0.0359        | 0.0117        | 1.4000e-004        | 4.4600e-003   | 3.3000e-004        | 4.7900e-003   | 1.2900e-003        | 3.2000e-004        | 1.6000e-003        | 0.0000        | 13.4567        | 13.4567        | 4.5000e-004        | 1.9400e-003        | 14.0461        |
| Worker       | 6.3500e-003        | 4.9800e-003   | 0.0639        | 1.6000e-004        | 0.0180        | 1.2000e-004        | 0.0181        | 4.7700e-003        | 1.1000e-004        | 4.8800e-003        | 0.0000        | 14.9679        | 14.9679        | 4.9000e-004        | 4.4000e-004        | 15.1104        |
| <b>Total</b> | <b>7.7100e-003</b> | <b>0.0409</b> | <b>0.0757</b> | <b>3.0000e-004</b> | <b>0.0224</b> | <b>4.5000e-004</b> | <b>0.0229</b> | <b>6.0600e-003</b> | <b>4.3000e-004</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>28.4246</b> | <b>28.4246</b> | <b>9.4000e-004</b> | <b>2.3800e-003</b> | <b>29.1565</b> |

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0243        | 0.1054        | 1.3276        | 1.9800e-003        |               | 3.2400e-003        | 3.2400e-003        |                | 3.2400e-003        | 3.2400e-003        | 0.0000        | 174.3662        | 174.3662        | 0.0564        | 0.0000        | 175.7761        |
| <b>Total</b> | <b>0.0243</b> | <b>0.1054</b> | <b>1.3276</b> | <b>1.9800e-003</b> |               | <b>3.2400e-003</b> | <b>3.2400e-003</b> |                | <b>3.2400e-003</b> | <b>3.2400e-003</b> | <b>0.0000</b> | <b>174.3662</b> | <b>174.3662</b> | <b>0.0564</b> | <b>0.0000</b> | <b>175.7761</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 1.3600e-003        | 0.0359        | 0.0117        | 1.4000e-004        | 4.4600e-003   | 3.3000e-004        | 4.7900e-003   | 1.2900e-003        | 3.2000e-004        | 1.6000e-003        | 0.0000        | 13.4567        | 13.4567        | 4.5000e-004        | 1.9400e-003        | 14.0461        |
| Worker       | 6.3500e-003        | 4.9800e-003   | 0.0639        | 1.6000e-004        | 0.0180        | 1.2000e-004        | 0.0181        | 4.7700e-003        | 1.1000e-004        | 4.8800e-003        | 0.0000        | 14.9679        | 14.9679        | 4.9000e-004        | 4.4000e-004        | 15.1104        |
| <b>Total</b> | <b>7.7100e-003</b> | <b>0.0409</b> | <b>0.0757</b> | <b>3.0000e-004</b> | <b>0.0224</b> | <b>4.5000e-004</b> | <b>0.0229</b> | <b>6.0600e-003</b> | <b>4.3000e-004</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>28.4246</b> | <b>28.4246</b> | <b>9.4000e-004</b> | <b>2.3800e-003</b> | <b>29.1565</b> |

**3.5 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     | 5.5100e-003        | 0.0556        | 0.0729        | 1.1000e-004        |               | 2.8400e-003        | 2.8400e-003        |                | 2.6100e-003        | 2.6100e-003        | 0.0000        | 10.0138        | 10.0138        | 3.2400e-003        | 0.0000        | 10.0948        |
| Paving       | 0.0000             |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>5.5100e-003</b> | <b>0.0556</b> | <b>0.0729</b> | <b>1.1000e-004</b> |               | <b>2.8400e-003</b> | <b>2.8400e-003</b> |                | <b>2.6100e-003</b> | <b>2.6100e-003</b> | <b>0.0000</b> | <b>10.0138</b> | <b>10.0138</b> | <b>3.2400e-003</b> | <b>0.0000</b> | <b>10.0948</b> |

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

**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       | 2.1000e-004        | 1.7000e-004        | 2.1500e-003        | 1.0000e-005        | 6.0000e-004        | 0.0000        | 6.1000e-004        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 0.5034        | 0.5034        | 2.0000e-005        | 1.0000e-005        | 0.5082        |
| <b>Total</b> | <b>2.1000e-004</b> | <b>1.7000e-004</b> | <b>2.1500e-003</b> | <b>1.0000e-005</b> | <b>6.0000e-004</b> | <b>0.0000</b> | <b>6.1000e-004</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>0.5034</b> | <b>0.5034</b> | <b>2.0000e-005</b> | <b>1.0000e-005</b> | <b>0.5082</b> |

**Mitigated Construction On-Site**

|              | ROG                | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 1.4000e-003        | 6.0800e-003        | 0.0865        | 1.1000e-004        |               | 1.9000e-004        | 1.9000e-004        |                | 1.9000e-004        | 1.9000e-004        | 0.0000        | 10.0138        | 10.0138        | 3.2400e-003        | 0.0000        | 10.0947        |
| Paving       | 0.0000             |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>1.4000e-003</b> | <b>6.0800e-003</b> | <b>0.0865</b> | <b>1.1000e-004</b> |               | <b>1.9000e-004</b> | <b>1.9000e-004</b> |                | <b>1.9000e-004</b> | <b>1.9000e-004</b> | <b>0.0000</b> | <b>10.0138</b> | <b>10.0138</b> | <b>3.2400e-003</b> | <b>0.0000</b> | <b>10.0947</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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       | 2.1000e-004        | 1.7000e-004        | 2.1500e-003        | 1.0000e-005        | 6.0000e-004        | 0.0000        | 6.1000e-004        | 1.6000e-004        | 0.0000        | 1.6000e-004        | 0.0000        | 0.5034        | 0.5034        | 2.0000e-005        | 1.0000e-005        | 0.5082        |
| <b>Total</b> | <b>2.1000e-004</b> | <b>1.7000e-004</b> | <b>2.1500e-003</b> | <b>1.0000e-005</b> | <b>6.0000e-004</b> | <b>0.0000</b> | <b>6.1000e-004</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>0.5034</b> | <b>0.5034</b> | <b>2.0000e-005</b> | <b>1.0000e-005</b> | <b>0.5082</b> |

**3.6 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 | 0.4731        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 2.0500e-003   | 0.0141        | 0.0181        | 3.0000e-005        |               | 8.2000e-004        | 8.2000e-004        |                | 8.2000e-004        | 8.2000e-004        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>0.4751</b> | <b>0.0141</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>8.2000e-004</b> | <b>8.2000e-004</b> |                | <b>8.2000e-004</b> | <b>8.2000e-004</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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        | 1.1500e-003        | 0.0000        | 3.2000e-004        | 0.0000        | 3.2000e-004        | 9.0000e-005        | 0.0000        | 9.0000e-005        | 0.0000        | 0.2685        | 0.2685        | 1.0000e-005        | 1.0000e-005        | 0.2710        |
| <b>Total</b> | <b>1.1000e-004</b> | <b>9.0000e-005</b> | <b>1.1500e-003</b> | <b>0.0000</b> | <b>3.2000e-004</b> | <b>0.0000</b> | <b>3.2000e-004</b> | <b>9.0000e-005</b> | <b>0.0000</b> | <b>9.0000e-005</b> | <b>0.0000</b> | <b>0.2685</b> | <b>0.2685</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.2710</b> |

**Mitigated Construction On-Site**

|                 | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|-----------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category        | tons/yr       |                    |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Archit. Coating | 0.4731        |                    |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 3.0000e-004   | 1.2900e-003        | 0.0183        | 3.0000e-005        |               | 4.0000e-005        | 4.0000e-005        |                | 4.0000e-005        | 4.0000e-005        | 0.0000        | 2.5533        | 2.5533        | 1.7000e-004        | 0.0000        | 2.5574        |
| <b>Total</b>    | <b>0.4734</b> | <b>1.2900e-003</b> | <b>0.0183</b> | <b>3.0000e-005</b> |               | <b>4.0000e-005</b> | <b>4.0000e-005</b> |                | <b>4.0000e-005</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>2.5574</b> |





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

|             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|

**4.2 Trip Summary Information**

| Land Use              | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-----------------------|-------------------------|----------|--------|-------------|------------|
|                       | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Single Family Housing | 0.00                    | 0.00     | 0.00   |             |            |
| Total                 | 0.00                    | 0.00     | 0.00   |             |            |

**4.3 Trip Type Information**

| Land Use              | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Single Family Housing | 10.80      | 7.30       | 7.50        | 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       |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Single Family Housing | 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



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

**Mitigated**

|                       | Natural Gas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Land Use              | kBTU/yr         | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |               |               |               |               |               |
| Single Family Housing | 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        |
| <b>Total</b>          |                 | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

|                       | Electricity Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|-----------------|---------|---------------|---------------|---------------|---------------|
| Land Use              | kWh/yr          | tons/yr | MT/yr         |               |               |               |
| Single Family Housing | 0               |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          |                 |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |





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

**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 | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Consumer Products     | 0.0000        |               |               |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Landscaping           | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

|           | Total CO2 | CH4    | N2O    | CO2e   |  |
|-----------|-----------|--------|--------|--------|--|
| Category  | tons/yr   | MT/yr  |        |        |  |
| Mitigated | 0.0000    | 0.0000 | 0.0000 | 0.0000 |  |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

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

|             |  |        |        |        |        |
|-------------|--|--------|--------|--------|--------|
| Unmitigated |  | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
|-------------|--|--------|--------|--------|--------|

**7.2 Water by Land Use****Unmitigated**

|                       | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use              | Mgal               | tons/yr | MT/yr         |               |               |               |
| Single Family Housing | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

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

**Mitigated**

|                       | Indoor/Outdoor Use |         | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|--------------------|---------|---------------|---------------|---------------|---------------|
| Land Use              | Mgal               | tons/yr | MT/yr         |               |               |               |
| Single Family Housing | 0 / 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          |                    |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             |         | Total CO2 | CH4    | N2O    | CO2e   |
|-------------|---------|-----------|--------|--------|--------|
|             | tons/yr | MT/yr     |        |        |        |
| Mitigated   |         | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated |         | 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**

**8.2 Waste by Land Use**

**Unmitigated**

|                       | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use              | tons           | tons/yr | MT/yr         |               |               |               |
| Single Family Housing | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                       | Waste Disposed |         | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|----------------|---------|---------------|---------------|---------------|---------------|
| Land Use              | tons           | tons/yr | MT/yr         |               |               |               |
| Single Family Housing | 0              |         | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b>          |                |         | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**9.0 Operational Offroad**

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

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - SFR Annual Construction****Los Angeles-Mojave Desert County, Summer****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses             | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------|-------|---------------|-------------|--------------------|------------|
| Single Family Housing | 56.00 | Dwelling Unit | 18.18       | 100,800.00         | 193        |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational modeled separately

Woodstoves - Operational modeled separately

Consumer Products - Operational modeled separately

Area Coating - Operational modeled separately

Landscape Equipment - Operational modeled separately

Energy Use - Operational modeled separately

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

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

Water And Wastewater - Operational modeled separately

Solid Waste - Operational modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering exposed area based on AVAQMD regulations for dust suppression and is not mitigated scenario.

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | NumDays                      | 20.00     | 10.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1,608.84  | 0.00         |
| tblEnergyUse            | NT24E                        | 6,155.97  | 0.00         |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

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

|                       |                          |              |        |
|-----------------------|--------------------------|--------------|--------|
| tblEnergyUse          | NT24NG                   | 6,384.00     | 0.00   |
| tblEnergyUse          | T24E                     | 93.13        | 0.00   |
| tblEnergyUse          | T24NG                    | 19,108.08    | 0.00   |
| tblFireplaces         | FireplaceDayYear         | 82.00        | 0.00   |
| tblFireplaces         | FireplaceHourDay         | 3.00         | 0.00   |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40     | 0.00   |
| tblFireplaces         | NumberGas                | 30.80        | 0.00   |
| tblFireplaces         | NumberNoFireplace        | 5.60         | 0.00   |
| tblFireplaces         | NumberWood               | 19.60        | 0.00   |
| tblLandscapeEquipment | NumberSummerDays         | 180          | 0      |
| tblLandUse            | Population               | 160.00       | 193.00 |
| tblSolidWaste         | SolidWasteGenerationRate | 79.13        | 0.00   |
| tblVehicleTrips       | ST_TR                    | 9.54         | 0.00   |
| tblVehicleTrips       | SU_TR                    | 8.55         | 0.00   |
| tblVehicleTrips       | WD_TR                    | 9.44         | 0.00   |
| tblWater              | IndoorWaterUseRate       | 3,648,625.43 | 0.00   |
| tblWater              | OutdoorWaterUseRate      | 2,300,220.38 | 0.00   |
| tblWoodstoves         | NumberCatalytic          | 2.80         | 0.00   |
| tblWoodstoves         | NumberNoncatalytic       | 2.80         | 0.00   |
| tblWoodstoves         | WoodstoveDayYear         | 82.00        | 0.00   |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20     | 0.00   |

**2.0 Emissions Summary****2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

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



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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         | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        | 0.0000        | 8.3189        | 8.3189        | 8.0000e-003        | 0.0000        | 8.5189        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> | <b>0.0000</b> | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b>  | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |               |               |                    |               |               |
| Area         | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        | 0.0000        | 8.3189        | 8.3189        | 8.0000e-003        | 0.0000        | 8.5189        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> | <b>0.0000</b> | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b>  | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 3/8/2022   | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/30/2022 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 66****Acres of Paving: 0****Residential Indoor: 204,120; Residential Outdoor: 68,040; 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 |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition            | 6                       | 15.00              | 0.00               | 82.00               | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 20.00              | 6.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 1.1812        | 0.0000        | 1.1812        | 0.1789         | 0.0000        | 0.1789        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |               | 1.2427        | 1.2427        |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>1.1812</b> | <b>1.2427</b> | <b>2.4239</b> | <b>0.1789</b>  | <b>1.1553</b> | <b>1.3341</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0255        | 0.9181        | 0.2141        | 3.4000e-003        | 0.0957        | 6.8200e-003        | 0.1025        | 0.0262         | 6.5300e-003        | 0.0328        |          | 372.1573        | 372.1573        | 0.0198        | 0.0591        | 390.2477        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003   | 2.9900e-003   | 116.4043        |
| <b>Total</b> | <b>0.0690</b> | <b>0.9479</b> | <b>0.6664</b> | <b>4.5300e-003</b> | <b>0.2189</b> | <b>7.6300e-003</b> | <b>0.2265</b> | <b>0.0589</b>  | <b>7.2800e-003</b> | <b>0.0662</b> |          | <b>487.5801</b> | <b>487.5801</b> | <b>0.0234</b> | <b>0.0620</b> | <b>506.6519</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 0.5316        | 0.0000        | 0.5316        | 0.0805         | 0.0000        | 0.0805        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |               | 0.0616        | 0.0616        |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>0.5316</b> | <b>0.0616</b> | <b>0.5932</b> | <b>0.0805</b>  | <b>0.0616</b> | <b>0.1421</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0255        | 0.9181        | 0.2141        | 3.4000e-003        | 0.0957        | 6.8200e-003        | 0.1025        | 0.0262         | 6.5300e-003        | 0.0328        |          | 372.1573        | 372.1573        | 0.0198        | 0.0591        | 390.2477        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003   | 2.9900e-003   | 116.4043        |
| <b>Total</b> | <b>0.0690</b> | <b>0.9479</b> | <b>0.6664</b> | <b>4.5300e-003</b> | <b>0.2189</b> | <b>7.6300e-003</b> | <b>0.2265</b> | <b>0.0589</b>  | <b>7.2800e-003</b> | <b>0.0662</b> |          | <b>487.5801</b> | <b>487.5801</b> | <b>0.0234</b> | <b>0.0620</b> | <b>506.6519</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003        | 155.2057        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0397</b> | <b>0.6032</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>153.8970</b> | <b>153.8970</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>155.2057</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003        | 155.2057        |
| <b>Total</b> | <b>0.0580</b> | <b>0.0397</b> | <b>0.6032</b> | <b>1.5100e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>153.8970</b> | <b>153.8970</b> | <b>4.7700e-003</b> | <b>3.9900e-003</b> | <b>155.2057</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 0.0123        | 0.3069        | 0.1036        | 1.2400e-003        | 0.0407        | 2.9600e-003        | 0.0436        | 0.0117         | 2.8300e-003        | 0.0145        |          | 133.0154        | 133.0154        | 4.4500e-003        | 0.0192        | 138.8359        |
| Worker       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003   | 155.2057        |
| <b>Total</b> | <b>0.0703</b> | <b>0.3466</b> | <b>0.7067</b> | <b>2.7500e-003</b> | <b>0.2050</b> | <b>4.0400e-003</b> | <b>0.2090</b> | <b>0.0553</b>  | <b>3.8200e-003</b> | <b>0.0591</b> |          | <b>286.9124</b> | <b>286.9124</b> | <b>9.2200e-003</b> | <b>0.0232</b> | <b>294.0416</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 0.0123        | 0.3069        | 0.1036        | 1.2400e-003        | 0.0407        | 2.9600e-003        | 0.0436        | 0.0117         | 2.8300e-003        | 0.0145        |          | 133.0154        | 133.0154        | 4.4500e-003        | 0.0192        | 138.8359        |
| Worker       | 0.0580        | 0.0397        | 0.6032        | 1.5100e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 153.8970        | 153.8970        | 4.7700e-003        | 3.9900e-003   | 155.2057        |
| <b>Total</b> | <b>0.0703</b> | <b>0.3466</b> | <b>0.7067</b> | <b>2.7500e-003</b> | <b>0.2050</b> | <b>4.0400e-003</b> | <b>0.2090</b> | <b>0.0553</b>  | <b>3.8200e-003</b> | <b>0.0591</b> |          | <b>286.9124</b> | <b>286.9124</b> | <b>9.2200e-003</b> | <b>0.0232</b> | <b>294.0416</b> |



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003        | 2.9900e-003        | 116.4043        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4524</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>115.4228</b> | <b>115.4228</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>116.4043</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0435        | 0.0297        | 0.4524        | 1.1300e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 115.4228        | 115.4228        | 3.5800e-003        | 2.9900e-003        | 116.4043        |
| <b>Total</b> | <b>0.0435</b> | <b>0.0297</b> | <b>0.4524</b> | <b>1.1300e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>115.4228</b> | <b>115.4228</b> | <b>3.5800e-003</b> | <b>2.9900e-003</b> | <b>116.4043</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 47.3048        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>47.5094</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 47.3048        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>47.3345</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0116        | 7.9300e-003        | 0.1206        | 3.0000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 30.7794        | 30.7794        | 9.5000e-004        | 8.0000e-004        | 31.0411        |
| <b>Total</b> | <b>0.0116</b> | <b>7.9300e-003</b> | <b>0.1206</b> | <b>3.0000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>30.7794</b> | <b>30.7794</b> | <b>9.5000e-004</b> | <b>8.0000e-004</b> | <b>31.0411</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| Land Use              | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-----------------------|-------------------------|----------|--------|-------------|------------|
|                       | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Single Family Housing | 0.00                    | 0.00     | 0.00   |             |            |
| Total                 | 0.00                    | 0.00     | 0.00   |             |            |

## 4.3 Trip Type Information

| Land Use              | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Single Family Housing | 10.80      | 7.30       | 7.50        | 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 |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

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

|                       |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Single Family Housing | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   |               |               |               |               |               |
| Single Family Housing | 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        |
| <b>Total</b>          |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

Mitigated

|                       | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use              | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Single Family Housing | 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        |
| <b>Total</b>          |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

## 6.0 Area Detail

## 6.1 Mitigation Measures Area

Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   | 0.1392 | 0.0533 | 4.6211 | 2.4000e-004 |               | 0.0256       | 0.0256     |                | 0.0256        | 0.0256      | 0.0000   | 8.3189    | 8.3189    | 8.0000e-003 | 0.0000 | 8.5189 |
| Unmitigated | 0.1392 | 0.0533 | 4.6211 | 2.4000e-004 |               | 0.0256       | 0.0256     |                | 0.0256        | 0.0256      | 0.0000   | 8.3189    | 8.3189    | 8.0000e-003 | 0.0000 | 8.5189 |

**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 | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Consumer Products     | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        |               | 8.3189        | 8.3189        | 8.0000e-003        |               | 8.5189        |
| <b>Total</b>          | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> |               | <b>0.0256</b> | <b>0.0256</b> |                | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Consumer Products     | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        |               | 8.3189        | 8.3189        | 8.0000e-003        |               | 8.5189        |
| <b>Total</b>          | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> |               | <b>0.0256</b> | <b>0.0256</b> |                | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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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## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****Palmdale GPU - SFR Annual Construction****Los Angeles-Mojave Desert County, Winter****1.0 Project Characteristics****1.1 Land Usage**

| Land Uses             | Size  | Metric        | Lot Acreage | Floor Surface Area | Population |
|-----------------------|-------|---------------|-------------|--------------------|------------|
| Single Family Housing | 56.00 | Dwelling Unit | 18.18       | 100,800.00         | 193        |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>            | 9                          |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Grading -

Demolition - See Assumptions

Architectural Coating - See Assumptions

Vehicle Trips - Operational modeled separately

Woodstoves - Operational modeled separately

Consumer Products - Operational modeled separately

Area Coating - Operational modeled separately

Landscape Equipment - Operational modeled separately

Energy Use - Operational modeled separately

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

Water And Wastewater - Operational modeled separately

Solid Waste - Operational modeled separately

Construction Off-road Equipment Mitigation - 2x per day watering exposed area based on AVAQMD regulations for dust suppression and is not mitigated scenario.

| Table Name              | Column Name                | Default Value | New Value    |
|-------------------------|----------------------------|---------------|--------------|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00        | 50.00        |
| tblArchitecturalCoating | EF_Residential_Exterior    | 250.00        | 150.00       |
| tblArchitecturalCoating | EF_Residential_Interior    | 250.00        | 50.00        |
| tblAreaCoating          | ReapplicationRatePercent   | 10            | 0            |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | FuelType                   | Diesel        | Electrical   |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 3.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 5.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 2.00         |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00          | 1.00         |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |
| tblConstEquipMitigation | Tier                       | No Change     | Tier 4 Final |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

|                         |                              |           |              |
|-------------------------|------------------------------|-----------|--------------|
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier                         | No Change | Tier 4 Final |
| tblConstructionPhase    | NumDays                      | 300.00    | 223.00       |
| tblConstructionPhase    | NumDays                      | 20.00     | 15.00        |
| tblConstructionPhase    | NumDays                      | 30.00     | 22.00        |
| tblConstructionPhase    | NumDays                      | 20.00     | 10.00        |
| tblConstructionPhase    | PhaseEndDate                 | 7/14/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 5/19/2023 | 12/30/2022   |
| tblConstructionPhase    | PhaseEndDate                 | 1/28/2022 | 1/21/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 3/25/2022 | 2/22/2022    |
| tblConstructionPhase    | PhaseEndDate                 | 6/16/2023 | 3/8/2022     |
| tblConstructionPhase    | PhaseStartDate               | 6/17/2023 | 12/5/2022    |
| tblConstructionPhase    | PhaseStartDate               | 3/26/2022 | 2/23/2022    |
| tblConstructionPhase    | PhaseStartDate               | 2/12/2022 | 1/22/2022    |
| tblConstructionPhase    | PhaseStartDate               | 5/20/2023 | 2/23/2022    |
| tblConsumerProducts     | ROG_EF                       | 2.14E-05  | 0            |
| tblConsumerProducts     | ROG_EF_Degreaser             | 3.542E-07 | 0            |
| tblConsumerProducts     | ROG_EF_PesticidesFertilizers | 5.152E-08 | 0            |
| tblEnergyUse            | LightingElect                | 1,608.84  | 0.00         |
| tblEnergyUse            | NT24E                        | 6,155.97  | 0.00         |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

|                       |                          |              |        |
|-----------------------|--------------------------|--------------|--------|
| tblEnergyUse          | NT24NG                   | 6,384.00     | 0.00   |
| tblEnergyUse          | T24E                     | 93.13        | 0.00   |
| tblEnergyUse          | T24NG                    | 19,108.08    | 0.00   |
| tblFireplaces         | FireplaceDayYear         | 82.00        | 0.00   |
| tblFireplaces         | FireplaceHourDay         | 3.00         | 0.00   |
| tblFireplaces         | FireplaceWoodMass        | 3,078.40     | 0.00   |
| tblFireplaces         | NumberGas                | 30.80        | 0.00   |
| tblFireplaces         | NumberNoFireplace        | 5.60         | 0.00   |
| tblFireplaces         | NumberWood               | 19.60        | 0.00   |
| tblLandscapeEquipment | NumberSummerDays         | 180          | 0      |
| tblLandUse            | Population               | 160.00       | 193.00 |
| tblSolidWaste         | SolidWasteGenerationRate | 79.13        | 0.00   |
| tblVehicleTrips       | ST_TR                    | 9.54         | 0.00   |
| tblVehicleTrips       | SU_TR                    | 8.55         | 0.00   |
| tblVehicleTrips       | WD_TR                    | 9.44         | 0.00   |
| tblWater              | IndoorWaterUseRate       | 3,648,625.43 | 0.00   |
| tblWater              | OutdoorWaterUseRate      | 2,300,220.38 | 0.00   |
| tblWoodstoves         | NumberCatalytic          | 2.80         | 0.00   |
| tblWoodstoves         | NumberNoncatalytic       | 2.80         | 0.00   |
| tblWoodstoves         | WoodstoveDayYear         | 82.00        | 0.00   |
| tblWoodstoves         | WoodstoveWoodMass        | 3,019.20     | 0.00   |

**2.0 Emissions Summary****2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

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



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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         | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        | 0.0000        | 8.3189        | 8.3189        | 8.0000e-003        | 0.0000        | 8.5189        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> | <b>0.0000</b> | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b>  | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |

**Mitigated Operational**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | lb/day        |               |               |                    |               |               |               |                |               |               | lb/day        |               |               |                    |               |               |
| Area         | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        | 0.0000        | 8.3189        | 8.3189        | 8.0000e-003        | 0.0000        | 8.5189        |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Mobile       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> | <b>0.0000</b> | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b>  | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |



## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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 |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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            | 1/1/2022   | 1/21/2022  | 5             | 15       |                   |
| 2            | Grading               | Grading               | 1/22/2022  | 2/22/2022  | 5             | 22       |                   |
| 3            | Building Construction | Building Construction | 2/23/2022  | 12/30/2022 | 5             | 223      |                   |
| 4            | Paving                | Paving                | 2/23/2022  | 3/8/2022   | 5             | 10       |                   |
| 5            | Architectural Coating | Architectural Coating | 12/5/2022  | 12/30/2022 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 66****Acres of Paving: 0****Residential Indoor: 204,120; Residential Outdoor: 68,040; 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 |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Architectural Coating | Air Compressors          | 1      | 6.00        | 78          | 0.48        |
| Demolition            | Concrete/Industrial Saws | 1      | 8.00        | 81          | 0.73        |
| Building Construction | Cranes                   | 1      | 7.00        | 231         | 0.29        |
| Demolition            | Excavators               | 3      | 8.00        | 158         | 0.38        |
| Grading               | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Building Construction | Forklifts                | 3      | 8.00        | 89          | 0.20        |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Building Construction | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| Grading               | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Paving                | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| Paving                | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Paving                | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition            | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading               | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Grading               | Scrapers                  | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Grading               | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |
| Building Construction | Welders                   | 1 | 8.00 | 46  | 0.45 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition            | 6                       | 15.00              | 0.00               | 82.00               | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading               | 8                       | 20.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Building Construction | 9                       | 20.00              | 6.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating | 1                       | 4.00               | 0.00               | 0.00                | 10.80              | 7.30               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Water Exposed Area

**3.2 Demolition - 2022****Unmitigated Construction On-Site**

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   |                   |                   |               |     |                   |
| Fugitive Dust |               |                |                |               | 1.1812        | 0.0000        | 1.1812        | 0.1789         | 0.0000        | 0.1789        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6392        | 25.7194        | 20.5941        | 0.0388        |               | 1.2427        | 1.2427        |                | 1.1553        | 1.1553        |          | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>2.6392</b> | <b>25.7194</b> | <b>20.5941</b> | <b>0.0388</b> | <b>1.1812</b> | <b>1.2427</b> | <b>2.4239</b> | <b>0.1789</b>  | <b>1.1553</b> | <b>1.3341</b> |          | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0249        | 0.9554        | 0.2178        | 3.4000e-003        | 0.0957        | 6.8400e-003        | 0.1025        | 0.0262         | 6.5400e-003        | 0.0328        |          | 372.2664        | 372.2664        | 0.0197        | 0.0591        | 390.3617        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003   | 3.2000e-003   | 110.3993        |
| <b>Total</b> | <b>0.0708</b> | <b>0.9882</b> | <b>0.6382</b> | <b>4.4700e-003</b> | <b>0.2189</b> | <b>7.6500e-003</b> | <b>0.2266</b> | <b>0.0589</b>  | <b>7.2900e-003</b> | <b>0.0662</b> |          | <b>481.6207</b> | <b>481.6207</b> | <b>0.0234</b> | <b>0.0623</b> | <b>500.7610</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 0.5316        | 0.0000        | 0.5316        | 0.0805         | 0.0000        | 0.0805        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.4623        | 2.0032        | 23.2798        | 0.0388        |               | 0.0616        | 0.0616        |                | 0.0616        | 0.0616        | 0.0000        | 3,746.7812        | 3,746.7812        | 1.0524        |     | 3,773.0920        |
| <b>Total</b>  | <b>0.4623</b> | <b>2.0032</b> | <b>23.2798</b> | <b>0.0388</b> | <b>0.5316</b> | <b>0.0616</b> | <b>0.5932</b> | <b>0.0805</b>  | <b>0.0616</b> | <b>0.1421</b> | <b>0.0000</b> | <b>3,746.7812</b> | <b>3,746.7812</b> | <b>1.0524</b> |     | <b>3,773.0920</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0249        | 0.9554        | 0.2178        | 3.4000e-003        | 0.0957        | 6.8400e-003        | 0.1025        | 0.0262         | 6.5400e-003        | 0.0328        |          | 372.2664        | 372.2664        | 0.0197        | 0.0591        | 390.3617        |
| Vendor       | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| Worker       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003   | 3.2000e-003   | 110.3993        |
| <b>Total</b> | <b>0.0708</b> | <b>0.9882</b> | <b>0.6382</b> | <b>4.4700e-003</b> | <b>0.2189</b> | <b>7.6500e-003</b> | <b>0.2266</b> | <b>0.0589</b>  | <b>7.2900e-003</b> | <b>0.0662</b> |          | <b>481.6207</b> | <b>481.6207</b> | <b>0.0234</b> | <b>0.0623</b> | <b>500.7610</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.3 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 |               |                |                |               | 9.2036        | 0.0000        | 9.2036         | 3.6538         | 0.0000        | 3.6538        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 3.6248        | 38.8435        | 29.0415        | 0.0621        |               | 1.6349        | 1.6349         |                | 1.5041        | 1.5041        |          | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>3.6248</b> | <b>38.8435</b> | <b>29.0415</b> | <b>0.0621</b> | <b>9.2036</b> | <b>1.6349</b> | <b>10.8385</b> | <b>3.6538</b>  | <b>1.5041</b> | <b>5.1579</b> |          | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003        | 147.1991        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5605</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>145.8057</b> | <b>145.8057</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>147.1991</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 |               |               |                |               | 4.1416        | 0.0000        | 4.1416        | 1.6442         | 0.0000        | 1.6442        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 0.7616        | 3.3000        | 32.9991        | 0.0621        |               | 0.1015        | 0.1015        |                | 0.1015        | 0.1015        | 0.0000        | 6,011.4105        | 6,011.4105        | 1.9442        |     | 6,060.0158        |
| <b>Total</b>  | <b>0.7616</b> | <b>3.3000</b> | <b>32.9991</b> | <b>0.0621</b> | <b>4.1416</b> | <b>0.1015</b> | <b>4.2432</b> | <b>1.6442</b>  | <b>0.1015</b> | <b>1.7457</b> | <b>0.0000</b> | <b>6,011.4105</b> | <b>6,011.4105</b> | <b>1.9442</b> |     | <b>6,060.0158</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003        | 147.1991        |
| <b>Total</b> | <b>0.0612</b> | <b>0.0438</b> | <b>0.5605</b> | <b>1.4300e-003</b> | <b>0.1643</b> | <b>1.0800e-003</b> | <b>0.1654</b> | <b>0.0436</b>  | <b>9.9000e-004</b> | <b>0.0446</b> |          | <b>145.8057</b> | <b>145.8057</b> | <b>4.9000e-003</b> | <b>4.2600e-003</b> | <b>147.1991</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.4 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     | 1.7062        | 15.6156        | 16.3634        | 0.0269        |               | 0.8090        | 0.8090        |                | 0.7612        | 0.7612        |          | 2,554.3336        | 2,554.3336        | 0.6120        |     | 2,569.6322        |
| <b>Total</b> | <b>1.7062</b> | <b>15.6156</b> | <b>16.3634</b> | <b>0.0269</b> |               | <b>0.8090</b> | <b>0.8090</b> |                | <b>0.7612</b> | <b>0.7612</b> |          | <b>2,554.3336</b> | <b>2,554.3336</b> | <b>0.6120</b> |     | <b>2,569.6322</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 0.0121        | 0.3196        | 0.1070        | 1.2400e-003        | 0.0407        | 2.9700e-003        | 0.0436        | 0.0117         | 2.8400e-003        | 0.0145        |          | 133.0628        | 133.0628        | 4.4300e-003        | 0.0192        | 138.8902        |
| Worker       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003   | 147.1991        |
| <b>Total</b> | <b>0.0734</b> | <b>0.3633</b> | <b>0.6675</b> | <b>2.6700e-003</b> | <b>0.2050</b> | <b>4.0500e-003</b> | <b>0.2090</b> | <b>0.0553</b>  | <b>3.8300e-003</b> | <b>0.0591</b> |          | <b>278.8685</b> | <b>278.8685</b> | <b>9.3300e-003</b> | <b>0.0234</b> | <b>286.0893</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2182        | 0.9457        | 11.9070        | 0.0178        |               | 0.0291        | 0.0291        |                | 0.0291        | 0.0291        | 0.0000        | 1,723.8213        | 1,723.8213        | 0.5575        |     | 1,737.7593        |
| <b>Total</b> | <b>0.2182</b> | <b>0.9457</b> | <b>11.9070</b> | <b>0.0178</b> |               | <b>0.0291</b> | <b>0.0291</b> |                | <b>0.0291</b> | <b>0.0291</b> | <b>0.0000</b> | <b>1,723.8213</b> | <b>1,723.8213</b> | <b>0.5575</b> |     | <b>1,737.7593</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 0.0121        | 0.3196        | 0.1070        | 1.2400e-003        | 0.0407        | 2.9700e-003        | 0.0436        | 0.0117         | 2.8400e-003        | 0.0145        |          | 133.0628        | 133.0628        | 4.4300e-003        | 0.0192        | 138.8902        |
| Worker       | 0.0612        | 0.0438        | 0.5605        | 1.4300e-003        | 0.1643        | 1.0800e-003        | 0.1654        | 0.0436         | 9.9000e-004        | 0.0446        |          | 145.8057        | 145.8057        | 4.9000e-003        | 4.2600e-003   | 147.1991        |
| <b>Total</b> | <b>0.0734</b> | <b>0.3633</b> | <b>0.6675</b> | <b>2.6700e-003</b> | <b>0.2050</b> | <b>4.0500e-003</b> | <b>0.2090</b> | <b>0.0553</b>  | <b>3.8300e-003</b> | <b>0.0591</b> |          | <b>278.8685</b> | <b>278.8685</b> | <b>9.3300e-003</b> | <b>0.0234</b> | <b>286.0893</b> |



Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

**3.5 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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1028</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003        | 3.2000e-003        | 110.3993        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4203</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>109.3543</b> | <b>109.3543</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>110.3993</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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     | 0.2805        | 1.2154        | 17.2957        | 0.0228        |               | 0.0374        | 0.0374        |                | 0.0374        | 0.0374        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.0000        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>0.2805</b> | <b>1.2154</b> | <b>17.2957</b> | <b>0.0228</b> |               | <b>0.0374</b> | <b>0.0374</b> |                | <b>0.0374</b> | <b>0.0374</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O                | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |                    |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000             | 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       | 0.0459        | 0.0328        | 0.4203        | 1.0700e-003        | 0.1232        | 8.1000e-004        | 0.1240        | 0.0327         | 7.5000e-004        | 0.0334        |          | 109.3543        | 109.3543        | 3.6800e-003        | 3.2000e-003        | 110.3993        |
| <b>Total</b> | <b>0.0459</b> | <b>0.0328</b> | <b>0.4203</b> | <b>1.0700e-003</b> | <b>0.1232</b> | <b>8.1000e-004</b> | <b>0.1240</b> | <b>0.0327</b>  | <b>7.5000e-004</b> | <b>0.0334</b> |          | <b>109.3543</b> | <b>109.3543</b> | <b>3.6800e-003</b> | <b>3.2000e-003</b> | <b>110.3993</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****3.6 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 | 47.3048        |               |               |                    |               | 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        |
| <b>Total</b>    | <b>47.5094</b> | <b>1.4085</b> | <b>1.8136</b> | <b>2.9700e-003</b> |               | <b>0.0817</b> | <b>0.0817</b> |                | <b>0.0817</b> | <b>0.0817</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Unmitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

## Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 47.3048        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.0297         | 0.1288        | 1.8324        | 2.9700e-003        |               | 3.9600e-003        | 3.9600e-003        |                | 3.9600e-003        | 3.9600e-003        | 0.0000        | 281.4481        | 281.4481        | 0.0183        |     | 281.9062        |
| <b>Total</b>    | <b>47.3345</b> | <b>0.1288</b> | <b>1.8324</b> | <b>2.9700e-003</b> |               | <b>3.9600e-003</b> | <b>3.9600e-003</b> |                | <b>3.9600e-003</b> | <b>3.9600e-003</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0183</b> |     | <b>281.9062</b> |

**Mitigated Construction Off-Site**

|              | ROG           | NOx                | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|----------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | lb/day        |                    |               |                    |               |                    |               |                    |                    |                    | lb/day   |                |                |                    |                    |                |
| Hauling      | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000             | 0.0000             |          | 0.0000         | 0.0000         | 0.0000             | 0.0000             | 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       | 0.0123        | 8.7600e-003        | 0.1121        | 2.9000e-004        | 0.0329        | 2.2000e-004        | 0.0331        | 8.7200e-003        | 2.0000e-004        | 8.9100e-003        |          | 29.1611        | 29.1611        | 9.8000e-004        | 8.5000e-004        | 29.4398        |
| <b>Total</b> | <b>0.0123</b> | <b>8.7600e-003</b> | <b>0.1121</b> | <b>2.9000e-004</b> | <b>0.0329</b> | <b>2.2000e-004</b> | <b>0.0331</b> | <b>8.7200e-003</b> | <b>2.0000e-004</b> | <b>8.9100e-003</b> |          | <b>29.1611</b> | <b>29.1611</b> | <b>9.8000e-004</b> | <b>8.5000e-004</b> | <b>29.4398</b> |

Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000        | 0.0000       | 0.0000     | 0.0000         | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

4.2 Trip Summary Information

| Land Use              | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-----------------------|-------------------------|----------|--------|-------------|------------|
|                       | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Single Family Housing | 0.00                    | 0.00     | 0.00   |             |            |
| Total                 | 0.00                    | 0.00     | 0.00   |             |            |

4.3 Trip Type Information

| Land Use              | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-----------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|                       | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| Single Family Housing | 10.80      | 7.30       | 7.50        | 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 |
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|
|----------|-----|------|------|-----|------|------|-----|-----|------|------|-----|------|----|

Palmdale GPU - SFR Annual Construction - Los Angeles-Mojave Desert County, Winter

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

|                       |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Single Family Housing | 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   | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 0.0000    | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

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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        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Single Family Housing | 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        |
| <b>Total</b>          |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**Mitigated**

|                       | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|-----------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use              | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Single Family Housing | 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        |
| <b>Total</b>          |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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**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   | 0.1392 | 0.0533 | 4.6211 | 2.4000e-004 |               | 0.0256       | 0.0256     |                | 0.0256        | 0.0256      | 0.0000   | 8.3189    | 8.3189    | 8.0000e-003 | 0.0000 | 8.5189 |
| Unmitigated | 0.1392 | 0.0533 | 4.6211 | 2.4000e-004 |               | 0.0256       | 0.0256     |                | 0.0256        | 0.0256      | 0.0000   | 8.3189    | 8.3189    | 8.0000e-003 | 0.0000 | 8.5189 |

**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 | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Consumer Products     | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        |               | 8.3189        | 8.3189        | 8.0000e-003        |               | 8.5189        |
| <b>Total</b>          | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> |               | <b>0.0256</b> | <b>0.0256</b> |                | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied****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 | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Consumer Products     | 0.0000        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |               | 0.0000        |                    |               | 0.0000        |
| Hearth                | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Landscaping           | 0.1392        | 0.0533        | 4.6211        | 2.4000e-004        |               | 0.0256        | 0.0256        |                | 0.0256        | 0.0256        |               | 8.3189        | 8.3189        | 8.0000e-003        |               | 8.5189        |
| <b>Total</b>          | <b>0.1392</b> | <b>0.0533</b> | <b>4.6211</b> | <b>2.4000e-004</b> |               | <b>0.0256</b> | <b>0.0256</b> |                | <b>0.0256</b> | <b>0.0256</b> | <b>0.0000</b> | <b>8.3189</b> | <b>8.3189</b> | <b>8.0000e-003</b> | <b>0.0000</b> | <b>8.5189</b> |

**7.0 Water Detail****7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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

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Special Status Species List

## Appendix C Biological Resources

| Scientific Name<br>Common Name   | Status                            | Habitat Requirements   |
|--|-----------------------------------|--|
| <i>Acanthoscyphus parishii</i> var. <i>abramsii</i><br>Abrams' oxytheca            | None/None<br>G4?T1T2/S1S2<br>1B.2 | Annual herb. Blooms Jun-Aug. Occurs in chaparral, granitic sand, shale. 1140-2060m (3740-6760ft).  |
| <i>Acanthoscyphus parishii</i> var. <i>parishii</i><br>Parish's oxytheca           | None/None<br>G4?T3T4/S3S4<br>4.2  | Chaparral, Lower montane coniferous forest. Sandy or gravelly places. 1220-2600m. Blooms Jun-Sep.  |
| <i>Androsace elongata</i> ssp. <i>acuta</i><br>California androsace                | None/None<br>G5?T3T4/S3S4<br>4.2  | Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland. Highly localized and often overlooked little plant. 150-1305m. Blooms Mar-Jun.                   |
| <i>Arctostaphylos gabilanensis</i><br>Gabilan Mountains manzanita                  | None/None<br>G1/S1<br>1B.2        | Chaparral, Cismontane woodland. Grainitic substrates. 300-700m. Blooms Jan.  |
| <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i><br>San Gabriel manzanita | None/None<br>G5T3/S3<br>1B.2      | Chaparral. Rocky outcrops; can be dominant shrub where it occurs. 595-1500m. Blooms Mar.   |
| <i>Arctostaphylos parryana</i> ssp. <i>tumescens</i><br>interior manzanita         | None/None<br>G4T3T4/S3S4<br>4.3   | Chaparral, Cismontane woodland. Montane chaparral or foothill woodland. 2100-2310m. Blooms Feb-Apr.  |
| <i>Astragalus hornii</i> var. <i>hornii</i><br>Horn's milk-vetch                   | None/None<br>GUT1/S1<br>1B.1      | Meadows and seeps, Playas. Lake margins, alkaline sites. 60-850m. Blooms May-Oct.  |
| <i>Astragalus preussii</i> var. <i>laxiflorus</i><br>Lancaster milk-vetch          | None/None<br>G4T2/S1<br>1B.1      | Chenopod scrub. Alkaline clay flats or gravelly or sandy washes and along draws in gullied badlands. 700-735 m in California. 700-700m. Blooms Mar-May.  |
| <i>Calochortus catalinae</i><br>Catalina mariposa lily                             | None/None<br>G3G4/S3S4<br>4.2     | Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland. In heavy soils, open slopes, openings in brush. 15-700m. Blooms (Feb)Mar-Jun.  |
| <i>Calochortus clavatus</i> var. <i>avius</i><br>Pleasant Valley mariposa lily     | None/None<br>G4T2/S2<br>1B.2      | Lower montane coniferous forest. Josephine silt loam and volcanically derived soil; often in rocky areas. 305-1800m. Blooms May-Jul.   |
| <i>Calochortus clavatus</i> var. <i>gracilis</i><br>slender mariposa-lily          | None/None<br>G4T2T3/S2S3<br>1B.2  | Perennial bulbiferous herb. Blooms March to June. Chaparral, coastal scrub. Shaded foothill canyons; often on grassy slopes within other habitat. 420-760m (1380-2495ft).  |
| <i>Calochortus palmeri</i> var. <i>palmeri</i><br>Palmer's mariposa-lily           | None/None<br>G3T2/S2<br>1B.2      | Chaparral, Lower montane coniferous forest, Meadows and seeps. Vernal moist places in yellow-pine forest, chaparral. 710-2390m. Blooms Apr-Jul.  |
| <i>Calochortus striatus</i><br>alkali mariposa lily                                | None/None<br>G3?/S2S3<br>1B.2     | Chaparral, Chenopod scrub, Meadows and seeps, Mojavean desert scrub. Alkaline meadows and ephemeral washes. 70-1600m. 70-1595m. Blooms Apr-Jun.  |
| <i>Calystegia peirsonii</i><br>Peirson's morning-glory                             | None/None<br>G4/S4<br>4.2         | Chaparral, Chenopod scrub, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland. Often in disturbed areas or along roadsides or in grassy, open areas. 30-1500m. Blooms Apr-Jun. |

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| Scientific Name<br>Common Name  | Status                        | Habitat Requirements   |
|---|-------------------------------|--|
| <i>Canbya candida</i><br>white pygmy-poppy  | None/None<br>G3G4/S3S4<br>4.2 | Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Gravelly, sandy, granitic places. 600-1460m. Blooms Mar-Jun.   |
| <i>Castilleja gleasoni</i><br>Mt. Gleason paintbrush                              | None/SR<br>G2/S2<br>1B.2      | Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland. On open flats or slopes in granitic soil. Restricted to the San Gabriel Mountains. 1160-2170m. Blooms May-Jun(Sep).                                       |
| <i>Castilleja plagiotoma</i><br>Mojave paintbrush                                 | None/None<br>G4/S4<br>4.3     | Great Basin scrub, Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland. Alluvial fans. 300-2500m. Blooms Apr-Jun.   |
| <i>Chorizanthe parryi</i> var. <i>parryi</i><br>Parry's spineflower               | None/None<br>G3T2/S2<br>1B.1  | Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 275-1220m. Blooms Apr-Jun. |
| <i>Chorizanthe spinosa</i><br>Mojave spineflower                                  | None/None<br>G4/S4<br>4.2     | Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Playas. Sometimes on alkaline soils. 6-1300m. Blooms Mar-Jul.   |
| <i>Cryptantha clokeyi</i><br>Clokey's cryptantha                                  | None/None<br>G3/S3<br>1B.2    | Mojavean desert scrub. Sandy or gravelly soils. 725-1365m. Blooms Apr.   |
| <i>Diplacus johnstonii</i><br>Johnston's monkeyflower                             | None/None<br>G4/S4<br>4.3     | Lower montane coniferous forest. On scree, in rocky or gravelly sites. Also in disturbed areas. 975-2920m. Blooms May-Aug.   |
| <i>Eriastrum rosamondense</i><br>Rosamond eriastrum                               | None/None<br>G1?/S1?<br>1B.1  | Chenopod scrub, Vernal pools. Alkali pool beds separated by very low hummocks with open cheopod scrub. Often sandy soil. 700-1175m. Blooms Apr-May(Jun-Jul).   |
| <i>Eriogonum umbellatum</i> var. <i>minus</i><br>alpine sulfur-flowered buckwheat | None/None<br>G5T4/S4<br>4.3   | Subalpine coniferous forest, Upper montane coniferous forest. Granitic substrate; usually gravelly or sandy. 1800-3068m. Blooms Jun-Sep.   |
| <i>Frasera neglecta</i><br>pine green-gentian                                     | None/None<br>G4/S4<br>4.3     | Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest. Dry, open woodlands. 1400-2500m. Blooms May-Jul.  |
| <i>Galium jepsonii</i><br>Jepson's bedstraw                                       | None/None<br>G3/S3<br>4.3     | Lower montane coniferous forest, Upper montane coniferous forest. On granite; gravelly hillsides and slopes. 1540-2500m. Blooms Jul-Aug.   |
| <i>Galium johnstonii</i><br>Johnston's bedstraw                                   | None/None<br>G4/S4<br>4.3     | Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland. Open, mixed forest. 1220-2300m. Blooms Jun-Jul.  |
| <i>Gilia latiflora</i> ssp. <i>cuyamensis</i><br>Cuyama gilia                     | None/None<br>G5?T4/S4<br>4.3  | Pinyon and juniper woodland. Sandy flats, lower river valleys. 595-2000m. Blooms Apr-Jun.  |
| <i>Goodmania luteola</i><br>golden goodmania                                      | None/None<br>G3/S3<br>4.2     | Meadows and seeps, Mojavean desert scrub, Playas, Valley and foothill grassland. Alkaline or clay soils. 20-2200m. Blooms Apr-Aug.   |
| <i>Hulsea vestita</i> ssp. <i>gabrielensis</i><br>San Gabriel Mountains sunflower | None/None<br>G5T3/S3<br>4.3   | Lower montane coniferous forest, Upper montane coniferous forest. Rocky sites. 1500-2500m. Blooms May-Jul.   |

| Scientific Name<br>Common Name  | Status                       | Habitat Requirements   |
|---|------------------------------|--|
| <i>Lilium parryi</i><br>lemon lily  | None/None<br>G3/S3<br>1B.2   | Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest. Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows & seeps. 1220-2745m. Blooms Jul-Aug. |
| <i>Linanthus concinnus</i><br>San Gabriel linanthus                             | None/None<br>G2/S2<br>1B.2   | Chaparral, Lower montane coniferous forest, Upper montane coniferous forest. Dry rocky slopes, often in Jeffrey pine/canyon oak forest. 1520-2800m. Blooms Apr-Jul.  |
| <i>Loeflingia squarrosa</i> var.<br><i>artemisiarum</i><br>sagebrush loeflingia | None/None<br>G5T3/S2<br>2B.2 | Desert dunes, Great Basin scrub, Sonoran desert scrub. Sandy flats and dunes. Sandy areas around clay slicks w/Sarcobatus, Atriplex, Tetradymia, etc. 700-1615m. Blooms Apr-May.   |
| <i>Lycium torreyi</i><br>Torrey's box-thorn                                     | None/None<br>G4G5/S3<br>4.2  | Mojavean desert scrub, Sonoran desert scrub. Sandy, rocky, washes, streambanks, desert valleys. -50-1220m. Blooms (Jan-Feb)Mar-Jun(Sep-Nov).   |
| <i>Malacothamnus davidsonii</i><br>Davidson's bush-mallow                       | None/None<br>G2/S2<br>1B.2   | Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland. Sandy washes. 185-1140m. Blooms Jun-Jan.   |
| <i>Monardella viridis</i><br>green monardella                                   | None/None<br>G3/S3<br>4.3    | Broadleafed upland forest, Chaparral, Cismontane woodland. 100-1010m. Blooms Jun-Sep.  |
| <i>Muilla coronata</i><br>crowned muilla  | None/None<br>G3/S3<br>4.2    | Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Mostly on barren flats and ridges in sandy, granitic soils. 670-1960m. Blooms Mar-Apr(May).  |
| <i>Opuntia basilaris</i> var.<br><i>brachyclada</i><br>short-joint beavertail   | None/None<br>G5T3/S3<br>1B.2 | Chaparral, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland. Sandy soil or coarse, granitic loam. 425-1800m. Blooms Apr-Jun(Aug).  |
| <i>Packera ionophylla</i><br>Tehachapi ragwort                                  | None/None<br>G4/S4<br>4.3    | Lower montane coniferous forest, Upper montane coniferous forest. Dry, open, granitic talus slopes. 1500-2700m. Blooms Jun-Jul.  |
| <i>Perideridia pringlei</i><br>adobe yampah                                     | None/None<br>G4/S4<br>4.3    | Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland. Serpentine, clay soils. Grassland hillsides; seasonally wet sites. 300-1800m. Blooms Apr-Jun(Jul).   |
| <i>Phacelia mohavensis</i><br>Mojave phacelia                                   | None/None<br>G4Q/S4<br>4.3   | Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland. Sandy or gravelly soils, dry streambeds. 1400-2500m. Blooms Apr-Aug.   |
| <i>Quercus durata</i> var. <i>gabrielensis</i><br>San Gabriel oak               | None/None<br>G4T3/S3<br>4.2  | Chaparral, Cismontane woodland. 450-1000m. Blooms Apr-May.   |
| <i>Symphyotrichum greatae</i><br>Greata's aster                                 | None/None<br>G2/S2<br>1B.3   | Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland. Mesic canyons. 300-2010m. Blooms Jun-Oct.   |
| <i>Syntrichopappus lemmonii</i><br>Lemmon's syntrichopappus                     | None/None<br>G4/S4<br>4.3    | Chaparral, Joshua tree "woodland", Pinyon and juniper woodland. Decomposed granite; sandy or gravelly soils. 500-1830m. Blooms Apr-May(Jun).   |
| <i>Bombus crotchii</i><br>Crotch bumble bee                                     | None/SCE<br>G3G4/S1S2        | Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.   |

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| Scientific Name<br>Common Name                                 | Status                        | Habitat Requirements  |
|--|-------------------------------|---|
| <i>Branchinecta lynchi</i><br>vernal pool fairy shrimp         | FT/None<br>G3/S3              | Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.   |
| <i>Euphydryas editha quino</i><br>quino checkerspot butterfly  | FE/None<br>G5T1T2/S1S2        | Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpureus</i> .  |
| <i>Helminthoglypta fontiphila</i><br>Soledad shoulderband      | None/None<br>G1/S1            | Air-breathing terrestrial snail. Known from type locality, Little Rock Creek Cyn on north side of San Gabriels; west to Santa Clarita in Soledad Cyn; east to the vicinity of Big Rock Creek; and north to Elizabeth Lake Cyn in the Sierra Pelona Mtns. Frequently found in riparian habitat (springs, seeps, along streams). May be found in rock piles, flood-borne debris, or under dead yuccas where other cover is not available. |
| <i>Anaxyrus californicus</i><br>arroyo toad                    | FE/None<br>G2G3/S2S3<br>SSC   | Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.   |
| <i>Rana draytonii</i><br>California red-legged frog            | FT/None<br>G2G3/S2S3<br>SSC   | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.  |
| <i>Rana muscosa</i><br>southern mountain yellow-legged frog    | FE/SE<br>G1/S1<br>WL          | Federal listing refers to populations in the San Gabriel, San Jacinto and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.   |
| <i>Anniella pulchra</i><br>Northern California legless lizard  | None/None<br>G3/S3<br>SSC     | Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.   |
| <i>Anniella spp.</i><br>California legless lizard              | None/None<br>G3G4/S3S4<br>SSC | Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of <i>Anniella</i> not yet assigned to new species within the <i>Anniella pulchra</i> complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.   |
| <i>Arizona elegans occidentalis</i><br>California glossy snake | None/None<br>G5T2/S2<br>SSC   | Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.   |
| <i>Emys marmorata</i><br>western pond turtle                   | None/None<br>G3G4/S3<br>SSC   | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.  |
| <i>Gopherus agassizii</i><br>desert tortoise                   | FT/ST<br>G3/S2S3              | Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.  |

| Scientific Name<br>Common Name  | Status                        | Habitat Requirements   |
|---|-------------------------------|--|
| <i>Phrynosoma blainvillii</i><br>coast horned lizard                              | None/None<br>G3G4/S3S4<br>SSC | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.           |
| <i>Thamnophis hammondi</i><br>two-striped gartersnake                             | None/None<br>G4/S3S4<br>SSC   | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.                 |
| <i>Accipiter cooperii</i><br>Cooper's hawk  | None/None<br>G5/S4<br>WL      | Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.  |
| <i>Agelaius tricolor</i><br>tricolored blackbird                                  | None/ST<br>G1G2/S1S2<br>SSC   |  |
| <i>Aimophila ruficeps canescens</i><br>southern California rufous-crowned sparrow | None/None<br>G5T3/S3<br>WL    | Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.  |
| <i>Artemisospiza belli belli</i><br>Bell's sage sparrow                           | None/None<br>G5T2T3/S3<br>WL  | Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.                |
| <i>Athene cunicularia</i><br>burrowing owl  | None/None<br>G4/S3<br>SSC     | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.                                  |
| <i>Buteo regalis</i><br>ferruginous hawk  | None/None<br>G4/S3S4<br>WL    | Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.                          |
| <i>Buteo swainsoni</i><br>Swainson's hawk   | None/ST<br>G5/S3              |  |
| <i>Charadrius montanus</i><br>mountain plover                                     | None/None<br>G3/S2S3<br>SSC   | Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.   |
| <i>Falco columbarius</i><br>merlin  | None/None<br>G5/S3S4<br>WL    | Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.   |
| <i>Lanius ludovicianus</i><br>loggerhead shrike                                   | None/None<br>G4/S4<br>SSC     | Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.                       |
| <i>Poliophtila californica californica</i><br>coastal California gnatcatcher      | FT/None<br>G4G5T3Q/S2<br>SSC  | Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.                               |
| <i>Toxostoma lecontei</i><br>Le Conte's thrasher                                  | None/None<br>G4/S3<br>SSC     | Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground. |



City of Palmdale  
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| Scientific Name<br>Common Name                                 | Status                      | Habitat Requirements   |
|--|-----------------------------|--|
| <i>Vireo bellii pusillus</i><br>least Bell's vireo             | FE/SE<br>G5T2/S2            | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.  |
| <i>Myotis yumanensis</i><br>Yuma myotis                        | None/None<br>G5/S4          | Occurs in a variety of lowland and upland habitats including desert scrub, riparian, and woodlands and forests. Distribution is closely tied to bodies of water. Roosts in a variety of areas including caves, cliffs, mines, crevices in live trees, and buildings and other man-made structures. |
| <i>Onychomys torridus ramona</i><br>southern grasshopper mouse | None/None<br>G5T3/S3<br>SSC | Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.   |
| <i>Perognathus inornatus</i><br>San Joaquin pocket mouse       | None/None<br>G2G3/S2S3      | Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.   |
| <i>Xerospermophilus mohavensis</i><br>Mohave ground squirrel   | None/ST<br>G2G3/S2S3        | Open desert scrub, alkali scrub & Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mojave Desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.   |
| Mojave Riparian Forest   | None/None<br>G1/S1.1        |  |
| Southern Coast Live Oak Riparian Forest                        | None/None<br>G4/S4          |  |
| Southern Cottonwood Willow Riparian Forest                     | None/None<br>G3/S3.2        |  |
| Southern Riparian Scrub  | None/None<br>G3/S3.2        |  |
| Southern Sycamore Alder Riparian Woodland                      | None/None<br>G4/S4          |  |
| Southern Willow Scrub  | None/None<br>G3/S2.1        |  |
| Valley Needlegrass Grassland                                   | None/None<br>G3/S3.1        | All topographic locations. Soils may be deep with high clay content, loamy, sandy, or silty derived from mudstone, sandstone, or serpentine substrates   |
| Wildflower Field   | None/None<br>G2/S2.2        |  |

# Appendix D

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Traffic Report

**DRAFT**

# **Palmdale General Plan Update and Program EIR**

## **Traffic Report**

**City of Palmdale**

**February 2022**

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## Report Overview

Palmdale is a city in northern Los Angeles County in the state of California. The city lies in the Antelope Valley region of Southern California. The San Gabriel Mountains, which are about 40 miles wide, separate Palmdale from the Los Angeles Basin to the south.

This report provides traffic information about the City of Palmdale including traffic counts, local land use and future travel demand forecasts in support of the General Plan Update. Traffic modeling was performed at the link level using the Regional Model. The SCAG region utilizes the SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Travel Demand Model (SCAG model) to produce forecasts for the region. The SCAG model used for the Palmdale General Plan Update (Palmdale GP) is consistent with the RTP assumptions for existing year and future year conditions as all projects in the RTP are included.

## EXISTING REGIONAL AND LOCAL ROADWAY

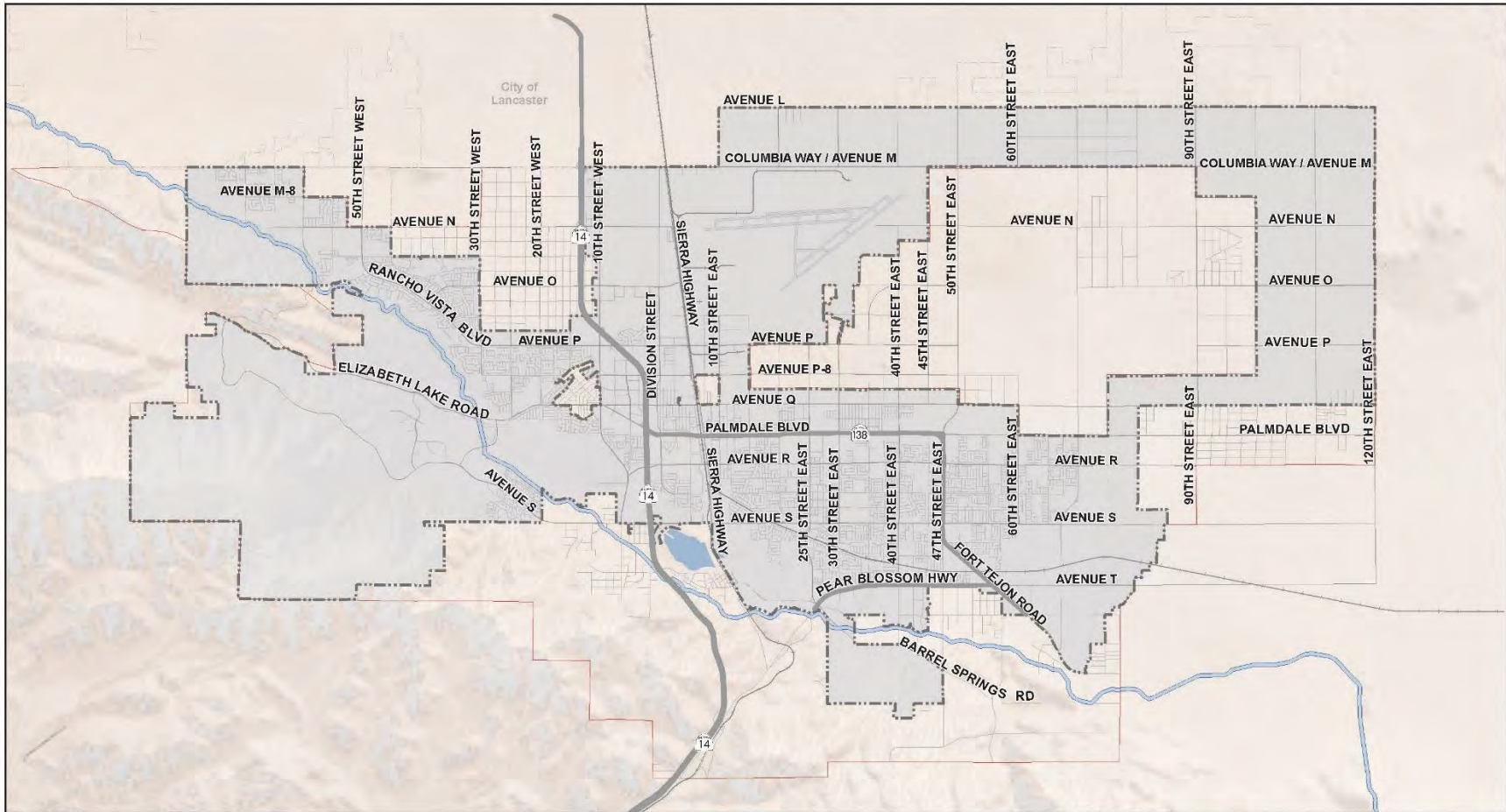
The existing regional and local roadway network in Palmdale is a hierarchical system of highways and local streets developed to provide regional traffic movement and local access. State Route (SR-) 14 provides access to a regional highway route, while SR-138 is a key arterial distributing vehicular traffic through the city.

The city's roadway network has been developed primarily around a suburban grid system in which arterials are spaced approximately every mile and secondary arterials are spaced every half-mile between major arterials. Each east–west lettered avenue is one mile from the next lettered east–west avenue, and each north–south numbered avenue is one mile from the next numbered north–south avenue.

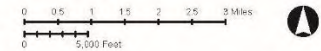
Between arterials, neighborhood local and collector streets are suburban in nature, with limited collector roads to lead traffic into arterials. Common features in neighborhoods are dead-ends, and cul-de-sacs. This design approach facilitates congestion, as arterials are the only options for moving between destinations in the community. Dead-ends and cul-de-sacs also limit connectivity for alternative modes of transportation, particularly people walking or bicycling.

The city is located approximately 60 freeway miles north of Los Angeles. Regional access to the city is provided via the Antelope Valley Freeway (State Route [SR] 14), which extends north to Kern County and south to the San Fernando Valley. Additional arterials providing regional access to the city are Palmdale Boulevard, Elizabeth Lake Road, Pearblossom Highway (SR 138), and Sierra Highway. The city's existing roadway network is illustrated in Figure 1.

Figure 1. Existing Roadway Network



Existing Road Network



Date Sources: City of Palmdale GIS data, World  
Terrain Base, 30' S ERI, USGS, NOAA.

Produced by Parsons  
April 2019



## FUNCTIONAL STREET CLASSIFICATIONS

The following section provides a description of the functional classification of the facilities within the study area. The city's roadway system consists of a wide range of transportation facilities, which serve two basic functions: mobility and land access. A circulation network is composed of facilities that emphasize mobility or access to different degrees. The following types of facilities are generically defined.

- Freeway: Mobility with very limited access.
- Expressway: Mobility with more frequent access to arterial streets than a freeway, but no direct land access.
- Arterial: Mobility with access to collectors, some local streets and major traffic.
- Collector: Connects local streets with arterials and also provides access to adjacent land uses, thus balancing mobility with access.
- Local: Provides access to adjacent land uses exclusively.

## PALMDALE ROADWAY CLASSIFICATIONS

### Regional Arterials

Regional arterials are limited access facilities that provide service to non-local through trips with minimal direct access to adjacent land uses. They have a design cross-section of eight lanes (four in each direction) with medians and turn lanes at a limited number of access points. Regional arterials are designated as 106-foot roadways, typically within a 120-foot right-of-way. At their design capacity of level of service (LOS) D, most regional arterials can carry between 49,500 and 64,000 vehicles per day. Some bike lanes currently exist within primary and regional arterials, however current City policy is to provide new bike lanes on secondary arterials only.

### Major Arterials

Major arterials are primarily intended to serve through, non-local traffic and provide limited local access. They have a cross-section of three through lanes, and a raised landscape median and turn lanes at a limited number of access points. Major arterials are designated as 84-foot roadways, within a 100-foot right-of-way. At LOS D, major arterials can accommodate between 40,000 and 44,000 vehicles per day.

### Secondary Arterials

Secondary arterials provide more local access than major arterials, while also providing a reduced level of non-local through traffic service. Secondary arterials have a cross-section of four through lanes, a bike lane in each direction and a left-turn lane within 68 feet of curb-to-curb space, within an 84-foot right-of-way. These roadways are usually undivided with the potential for limited on-street parking, turn lanes at major intersections, and partial control of vehicular and pedestrian access from driveways, cross streets, and crosswalks. Secondary arterials can accommodate between 22,000 and 24,000 vehicles per day at an acceptable level of service.

## COUNTY OF LOS ANGELES CLASSIFICATIONS

### Freeways/Expressways

The freeway is the highest level of roadway in the planning area and accommodates regional and interstate travel. Freeways typically have a minimum 180-foot cross-section and at least four through lanes (two per direction). Freeways have limited access at interchanges and have a typical design capacity of over 2,000 vehicles per hour per lane.

### Major Highways

The major highway is intended to accommodate the majority of traffic connecting between cities and communities in the region and the regional freeway system. Major highways have an ultimate design cross-section of at least four lanes (two in each direction) with medians and turn lanes at limited number of access points. The right-of-way for major highways is typically 100 feet. At their design capacity of LOS E, most major highways can carry between 49,500 and 54,000 vehicles per day. Also classified as major highways, are key inter-urban roads, non-urban access ways and recreational roads. While many of these may not be planned for urban-type improvements, the wider right-of-way is needed for other transportation uses including bus turnouts and separate bicycle and pedestrian facilities.

### Secondary Highways

The secondary highway is primarily intended to serve through traffic and collect traffic from limited secondary highways and collectors. In rural areas, secondary highways also serve as connecting highways between non-urban communities or in locations where widening a roadway to major highway width is not practical. Secondary highways normally have a cross-section of four through lanes with limited access from cross streets and driveways. Medians and turn lanes at limited locations are usually provided when adequate right-of-way (80 feet is the desired width) is developed and traffic and/or safety conditions warrant. At LOS E, secondary highways can accommodate between 40,000 and 44,000 vehicles per day.

### Limited Secondary Highways

Limited secondary highways are typically found in the foothills and mountain and canyon areas. Their primary function is to provide access to low-density settlements and recreational areas. The standard for this type of roadway is two through lanes in a 64-foot right-of-way. These roadways are undivided with possible turn lanes at major intersections, graded shoulders, and limited control of vehicular and pedestrian access from driveways, cross streets, and crosswalks. Limited secondary highways can accommodate between 22,000 and 24,000 vehicles per day at an acceptable level of service; however, they are typically low-volume roads.

## ROADWAY FACILITIES

### Regional Road Network

#### **State Route 14**

State Route 14 is a north–south state highway in southern California, approximately 116.6 miles in length. The southern portion of the highway is signed as Antelope Valley Freeway. The route connects Interstate 5 (I-5), near Santa Clarita, with U.S. Route 395, near Inyokern.

The southern part of the route is a busy commuter freeway serving and connecting the communities of Palmdale and Lancaster with the Greater Los Angeles area. The northern portion is legislatively named Aerospace Highway, as the highway serves Edwards Air Force Base. With U.S. Route 395, this road connects Los Angeles with such places as Mammoth Mountain, Mono Lake, Yosemite National Park and Reno, Nevada. Housing and population growth in Santa Clarita, Lancaster and Palmdale has made the Antelope Valley Freeway one of the most congested freeways in southern California.

#### **State Route 138**

State Route 138 (SR 138) is an east–west state highway generally following the northern foothills of the San Gabriel Mountains from its junction with I-5 south of Gorman eastward to Mount Anderson Junction, its eastern junction with State Route 18 south of Crestline in the San Bernardino Mountains. The route is approximately 105.4 miles long.

The western leg of SR 138 extends from I-5 to Gorman Post Road, Lancaster Road from Gorman Post Road to 245th Street West near Neenach School, and Avenue D from 245th Street West to SR 138's north junction with SR 14. After its co-routing with the Antelope Valley Freeway (SR 14) through Lancaster and Palmdale, it passes through the east side of Palmdale as four- to six-lane Palmdale Boulevard, 47th Street East, and Fort Tejon Road to Pearblossom Highway. The state route continues, named locally as Pearblossom Highway, as a four-lane facility to just west of 72nd Street East, where it tapers to three, then two lanes and continues easterly on Pearblossom Highway through Littlerock, Pearblossom and Llano to its junction with SR 18.

### Local Road Network

The street system is laid out on a grid. Each lettered east–west avenue is one mile from the next letter. By way of example, Avenue R is one mile north from Avenue S. In between each whole letter avenue, there are 15 sub-avenues labeled -1 through -15. Along with whole letter avenues, the -8 avenues are also major thoroughfares. Avenue R-8, for example, is a major road just like Avenue R and Avenue S. Sometimes the -8 avenues are renamed. Avenue Q-8 is renamed Palmdale Boulevard and Avenue P-8 is renamed Technology Drive.

Major streets which run north to south are numbered inside their direction, i.e., 10th Street West and 10th Street East. Each 0 and 5 street is a major thoroughfare with each 0 street being 1 mile from the previous 0 street. For example, 40th Street East is one mile east of 30th Street East. The east–west dividing line is Division Street, west of the Union Pacific/Metrolink rail corridor, which would be the equivalent of 0 Street East/West.

## Major East–West Roads

### **Avenue L**

Avenue L is unpaved from just west of 150th Street East to the arterial’s intersection with 60th Street East. Avenue L then becomes a paved two-lane road and begins its operation as a regional arterial. The asphalt is extremely degraded in some places and appears to be simply a farm road at times with no roadway striping. There is a roadway break between 40th Street East and 35th Street East, where East Avenue L picks up again as a two-lane arterial. At 5th Street East, Avenue L begins operating at two lanes in each direction and periodic sections of three lanes in both the east and west directions. East of 42nd Street West, Avenue L transitions back to one lane in each direction to its end as a paved roadway at 90th Street West.

### **Columbia Way/Avenue M**

East Avenue M transitions from a major arterial to a regional arterial and then back to a major arterial as it progresses in an east–west direction through the Palmdale area. The arterial begins as a paved roadway in the east at a right-angle intersection with 100th Street East. There is a break in pavement between 90th Street East and 70th Street East where the roadway continues as a dirt road. The portion of East Avenue M that is paved between 100th Street East and 70th Street East operates as one lane in each direction. The arterial picks up again at 50th Street East with two lanes in each direction, operating as East Avenue M/ColumbiaWay. To the west of 10th Street West, West Avenue M again transitions to one lane in each direction. The arterial terminates in the west at 75th Street West.

### **Avenue P/Rancho Vista Boulevard**

This major arterial extends from 50th Street West to 15th Street East as Rancho Vista Boulevard, and from 15th Street East to 50th Street East as East Avenue P. West of 15th Street West, Rancho Vista Boulevard is a four-lane major arterial servicing residential areas. Between 15th Street West and approximately 0.25-mile west of Division Street, at Fairway Drive, Rancho Vista Boulevard is a six-lane arterial servicing commercial and residential areas with a speed limit of 35 mph. East of Fairway Drive, Rancho Vista Boulevard continues as a four-lane arterial road servicing commercial and industrial areas including the Palmdale Regional Airport and Plant 42. Per the City’s most recent General Plan, Avenue P has a plan line dedication of 104 or 114 feet<sup>1</sup> of right-of-way allowing for six lanes with a median at build-out conditions.

There is a two-track railroad crossing of Rancho Vista Boulevard located between Sierra Highway and Eighth Street East/Lockheed Way. The crossing is approximately 50 feet east of and 1,300 feet west of the Sierra Highway and Eighth Street East intersections, respectively. The crossing is currently equipped with two curb-mounted California Public Utilities Commission (CPUC) Standard 9 (flashing light signal assembly with automatic gate arm) warning devices, two median-mounted CPUC Standard 9 (flashing light signal assembly with automatic gate arm) warning devices, railroad advanced warning signage, and pavement markings. A grade separation of the railroad crossing is currently being designed.

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<sup>1</sup>The build-out width of the right-of-way on all local roadways is independent on whether or not the street will accommodate a bicycle lane, which will be determined in the City’s Bicycle Transportation Plan.

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**Technology Drive/East Avenue P-8**

Technology Drive/East Avenue P-8 is approximately one-half mile south of and parallel to Rancho Vista Boulevard/Avenue P. This secondary arterial has three discontinuous segments which are paved. The western-most segment is named Technology Drive from 10th Street West to Division Street, and East Avenue P-8 from east of Division Street to Sierra Highway. This segment is striped for four through lanes and a center shared left-turn lane. The middle paved portion runs between Eighth Street East and 10th Street East and has two through lanes. The eastern paved portion runs between 40th Street East and 50th Street East and also has two through lanes.

**Avenue Q**

About 0.5-mile north of Palmdale Boulevard, Avenue Q runs parallel to Palmdale Boulevard. Avenue Q is designated as a major and secondary arterial street but is discontinuous. It runs from just west of Trade Center Drive to just east of 40th Street East. West of SR 14, West Avenue Q is a major arterial street from Trade Center Drive to Fifth Street West, servicing a light industrial area. Between Fifth Street West and SR 14, West Avenue Q is a secondary arterial street servicing the Antelope Valley Auto Center. From SR 14 to Third Street East, West/East Avenue Q is again a major arterial street servicing mainly single-family residential land uses.

To the east of the Union Pacific and Metrolink railroad tracks, East Avenue Q begins again as a major arterial at Sierra Highway. East of 15th Street East until East Avenue Q ends just east of 40th Street East, East Avenue Q continues as a major arterial. Per the City's existing General Plan, Avenue Q has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions.

The City of Palmdale aspires to grade separate Avenue Q with the Union Pacific, Metrolink, and future high-speed railroad tracks, thereby connecting the east and westerly segments of this arterial street.

**Palmdale Boulevard/SR 138**

West of SR 14, West Palmdale Boulevard is a four-lane regional arterial from 10th Street West to the SR 14 southbound ramp terminal intersection. Just east of SR 14, Palmdale Boulevard is a state-owned route, signed as SR 138, running east to 47th Street East. From SR 14, traveling east to 25th Street East, the facility serves a highly concentrated general commercial area. Per the City's General Plan, West Palmdale Boulevard between Elizabeth Lake Road and Division Street has a plan line dedication of 126 or 136 feet of right-of-way allowing for eight lanes with a median at build-out conditions. East Palmdale Boulevard between Division Street and 120th Street East has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions. A design effort is currently underway to widen Palmdale Boulevard to six lanes between Fifth Street East and 10th Street East.

**East Avenue R/Rayburn Road**

East Avenue R/Rayburn Road is approximately one-half mile south of Palmdale Boulevard. West of Division Street, the roadway is known as Rayburn Road and East Avenue R east of Division Street. Rayburn Road is a two-lane facility. East of Division Street, East Avenue R is a two-lane arterial with a center turning lane. From Sixth Street East to 47th Street East, East Avenue R is a four-lane arterial except for the portion between 35th Street East and 40th Street East, where the eastbound direction narrows to one lane. Per the City's existing General Plan, Rayburn Road/East Avenue R between Tierra

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Subida Avenue and 90th Street East has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions.

The City and Caltrans are currently pursuing a safety project along a two-mile long segment of Avenue R between Sierra Highway and 25th Street East. The project will add a dedicated bike lane, a left-turn lane midblock, and continuous pavement and intersection sidewalk ramps that are compliant with the Americans with Disabilities Act (ADA) guidelines.

**Avenue S**

Avenue S is approximately one mile south of Avenue R/Rayburn Road. It is designated as a major arterial as it runs about 1.75 miles west of SR 14 to about 3,800 feet east of 47th Street East. Avenue S is a four-lane road with combinations of medians and left-turn lanes. East Avenue S has a full diamond interchange with SR 14. Per the City's existing General Plan, Avenue S between City Ranch Road/Ranch Center Drive and Bridge Road has a plan line dedication of 104 or 114 feet of right-of-way, allowing for six lanes with a median at build-out conditions; a plan line dedication of 126 to 136 feet of right-of-way between Bridge Road and 35th Street East allowing for eight lanes at build-out conditions; and a plan line dedication of 104 or 114 feet of right-of-way between 35th Street East and 70th Street East allowing for six lanes at build-out conditions.

**Major North–South Roads**

**10th Street West**

Running parallel to SR 14, 10th Street West is an arterial road that runs from the city of Lancaster to Palmdale Boulevard, continuing south where it changes names to become Tierra Subida Avenue. South of SR 14 to Technology Drive, 10th Street West continues as a regional arterial. South of Technology Drive, until it becomes Tierra Subida Avenue at Palmdale Boulevard, 10th Street West is a major arterial road. Per the City's existing General Plan, 10th Street West between West Avenue M and West Palmdale Boulevard has a plan line dedication of 126 or 136 feet of right-of-way allowing for eight lanes with a median at build-out conditions.

A design effort is currently underway to widen 10th Street West south of SR 14 to Palmdale Boulevard.

**Division Street**

Division Street is a north–south, two-lane arterial that runs from just north of Avenue O to East Avenue R-8. The road is located between Sierra Highway and SR 14 and is discontinuous between Rancho Vista Boulevard and Technology Drive/East Avenue P-8. From Technology Drive/East Avenue P-8 to just north of East Avenue P-12, Division Street is not paved. As mentioned previously, Division Street is the dividing line between east and west naming of streets. Per the City's existing General Plan, Division Street between Avenue M and Avenue R-8 has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions.

**Fifth Street East**

Fifth Street East is a north–south running arterial west of the Union Pacific/Metrolink rail corridor. The road runs between East Avenue S and East Avenue Q and has two through lanes. Per the City's General Plan, Fifth Street East between East Avenue Q and Palmdale Avenue has a plan line dedication of 84 or 92 feet of right-of-way allowing for four lanes without a median, and a plan line dedication of 84 or

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92 feet of right-of-way between Palmdale Boulevard and East Avenue S allowing for four lanes with a median at build-out conditions.

**Sierra Highway**

Just west of 10th Street East, Sierra Highway is a four-lane regional arterial running in a northwest to southeast direction. From Rancho Vista Boulevard to Pearblossom Highway, Sierra Highway is a four-lane major arterial. Sierra Highway services residential, commercial, and industrial areas. Per the City's existing General Plan, Sierra Highway between East Avenue M and East Avenue P has a plan line dedication of 126 or 136 feet of right-of-way allowing for eight lanes with a median at build-out conditions, and between East Avenue P and Pearblossom Highway has a plan line dedication of 104 or 114 feet of right-of-way allowing for 6 lanes with a median at build-out conditions. A design effort is currently underway to widen Sierra Highway to six lanes between East Avenue Q and East Avenue R.

**10th Street East**

One mile west of 20th Street East, 10th Street East is a major two-lane arterial street running in a north-south direction. From the Lockheed Martin facility north of East Avenue P to East Avenue Q, the road services commercial and industrial areas. At East Avenue Q, 10th Street East widens to a four-lane major arterial continuing to Palmdale Boulevard. Per the City's existing General Plan, 10th Street East between East Avenue L and Palmdale Boulevard has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions, and between Palmdale Boulevard and East Avenue S has a plan line dedication of 84 or 92 feet of right-of-way allowing for four lanes with a median at build-out conditions.

**15th Street East**

Fifteenth Street East is a north-south running arterial that is 0.5 mile east of 10th Street East. This road reaches between Lockheed Way and East Avenue R and has two through lanes. Per the City's General Plan, 15th Street East between East Avenue L and East Avenue P has a plan line dedication of 84 or 92 feet of right-of-way allowing for 4 lanes with a median; the section between Avenue P and Avenue P-8 has a plan line dedication of 104 or 114 feet of right-of-way allowing for four lanes with a median at build-out conditions.

**20th Street East**

Twentieth Street East is a north-south running arterial located one-half mile east of 15th Street East. This road runs from East Avenue P on the north to East Avenue S on the south. Between East Avenue P and Palmdale Boulevard, 20th Street East is two lanes wide and serves some commercial development, but mainly residential land uses. At Palmdale Boulevard, 20th Street East widens to a four-lane secondary arterial road, servicing residential areas. Per the City's existing General Plan, 20th Street East between East Avenue L and East Avenue M has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median; and between East Avenue P and East Avenue S has a plan line dedication of 84 or 92 feet of right-of-way allowing for four lanes with a median at build-out conditions. The planned High Desert Corridor freeway would have a local service interchange with 20th Street East.

**25th Street East**

One-half mile to the east of 20th Street East is 25th Street East, a major arterial which runs from East Avenue P to south of Pearblossom Highway. Like 30th Street, 25th Street is a two-lane road north of Palmdale Boulevard. South of Palmdale Boulevard, it is a four-lane road until Pearblossom Highway,



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where it narrows to a two-lane road. Per the City's General Plan, 25th Street East between East Avenue L and East Avenue M has a plan line dedication of 84 or 92 feet of right-of-way allowing for four lanes with a median; and between East Avenue P and Pearblossom Highway/Barrel Springs Road has a 104- or 114-foot right-of-way allowing for six lanes with a median at build-out conditions.

**30th Street East**

Running parallel to 25th Street East, one-half mile to the east, is 30th Street East. Thirtieth Street East is a two-lane major arterial road which runs from just north of East Avenue P to just south of East Avenue S. At Palmdale Boulevard, 30th Street East widens to four lanes. Per the City's existing General Plan, 30th Street East has a plan line dedication of 104 or 114 feet of right-of-way allowing for six lanes with a median at build-out conditions. The planned High Desert Corridor freeway would have a local service interchange with 30th Street East.

**40th Street East**

Fortieth Street East is one mile east of 30th Street East. Between East Avenue N, two miles north of East Avenue P, and East Avenue P, 40th Street East is a two-lane secondary arterial road. From East Avenue P to East Avenue R-8, 2.5 miles to the south, 40th Street is a major arterial. South of East Avenue R-8 to Pearblossom Highway, 40th Street East continues as a major arterial which serves residential areas. Per the City's existing General Plan, 40th Street East between East Avenue L and East Avenue P has a plan line dedication of 84 or 92 feet of right-of-way allowing for four lanes with a median, and between East Avenue P and East Avenue S has a dedicated 104- or 114-foot right-of-way allowing for six lanes with a median at build-out conditions.

**50th Street East/47th Street East**

Approximately six miles to the east of SR 14, 50th Street East runs in a north-south direction, parallel with the SR 14 freeway. Fiftieth Street East is a two-lane expressway that services mainly unincorporated areas of Palmdale. Per the City's existing General Plan, 50th Street East/47th Street East between East Avenue L and East Avenue S-8 has a plan line dedication of 126 or 136 feet of right-of-way allowing for eight lanes with a median at build-out conditions. The planned High Desert Corridor freeway would have a local service interchange with 50th Street East.

**70th Street East**

Seventieth Street East runs primarily in a north-south direction from its origin at East Avenue D in the north to its terminus operating as a paved roadway. As the secondary arterial makes a 90-degree turn to the west and becomes East Avenue

S. Seventieth Street East continues southward as an unpaved road to the Union Pacific (Colton-Palmdale Cutoff) railroad tracks. The unpaved roadway begins again to the south of East Avenue T and continues to the south past the quarry until its terminus at SR 138. The majority of this roadway operates as one lane in each direction.

**90th Street East/87th Street East**

Ninetieth Street East begins as a paved major arterial approximately one mile north of East Avenue E in Lancaster. In Littlerock, near Avenue S, 90th Street East makes a jog to the west and becomes 87th Street east, operating as a secondary arterial until its terminus at Mt. Emma Road. The arterial operates in a north-south direction primarily as one lane in each direction.



## Methodology

The Southern California Association of Governments (SCAG) region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. The agency develops long-range regional transportation plans including sustainable community strategies and growth forecast components, regional transportation improvement programs, and regional housing needs allocations. Palmdale, California is located within the SCAG region.

The SCAG region utilizes the SCAG 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Travel Demand Model (SCAG model) to produce forecasts for the region. The SCAG model used for the Palmdale General Plan Update (Palmdale GP) is consistent with the RTP assumptions for existing year and future year conditions as all projects in the RTP are included. The 2040 future year model datasets were used to produce the future conditions for the Palmdale GP scenarios. The external-to-internal (XI) and internal-to-external (IX) trips forecast by the SCAG model are terminated at the external zones known as gateways. For Palmdale, the nearest gateway is State Route (SR) 14 at the Kern County line. These external trips with one end in the SCAG region are fixed for each horizon year and do not vary with changes in socioeconomic data. The SCAG model roadway classifications are consistent with the Federal Highway Administration (FHWA) roadway classifications, which are more detailed and do not necessarily align with the City of Palmdale classifications, but are generally similar in nature. The main roadway classifications for the SCAG model are listed below, where each of these roadway types are further sub-divided.

- Freeways
- HOV and express lanes
- Expressways/parkways
- Principal arterials
- Minor arterials
- Major collectors
- Minor collectors
- Ramps
- Centroid connectors

The SCAG traffic analysis zone (TAZ) system was refined for the Palmdale sphere of influence (SOI) only to perform traffic assignments after the original SCAG model was run through the four steps of the complete model with the updated land use datasets for each of the scenarios. The SCAG model had 45 zones in the Tier 1 zone system within the Palmdale SOI. This zone system within the Palmdale SOI was disaggregated to the Tier 3 zone system with 336 zones as illustrated in Figure 2. The expanded zone system in the Palmdale SOI was used for traffic assignment purposes to better reflect the ground conditions in the study area because the original SCAG Tier 1 zones were too large. The SCAG model networks for existing and future conditions were updated with the revised zone system to perform traffic assignments. The SCAG model datasets were available for horizon year 2040 but not beyond; hence, the 2040 datasets were used for the 2045 Palmdale GP scenarios with updated land use within the Palmdale SOI.

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Various land use scenarios were developed as part of the General Plan Update for the City of Palmdale, after which the SCAG model results were tabulated for the Palmdale SOI that encompasses Palmdale. The 45 zones in the Tier 1 zone system of the SCAG model were identified as the Palmdale SOI. The geographic area covered by the Palmdale SOI includes Palmdale and the surrounding areas as illustrated in Figure 3.

Figure 2: Palmdale Traffic Analysis Zones

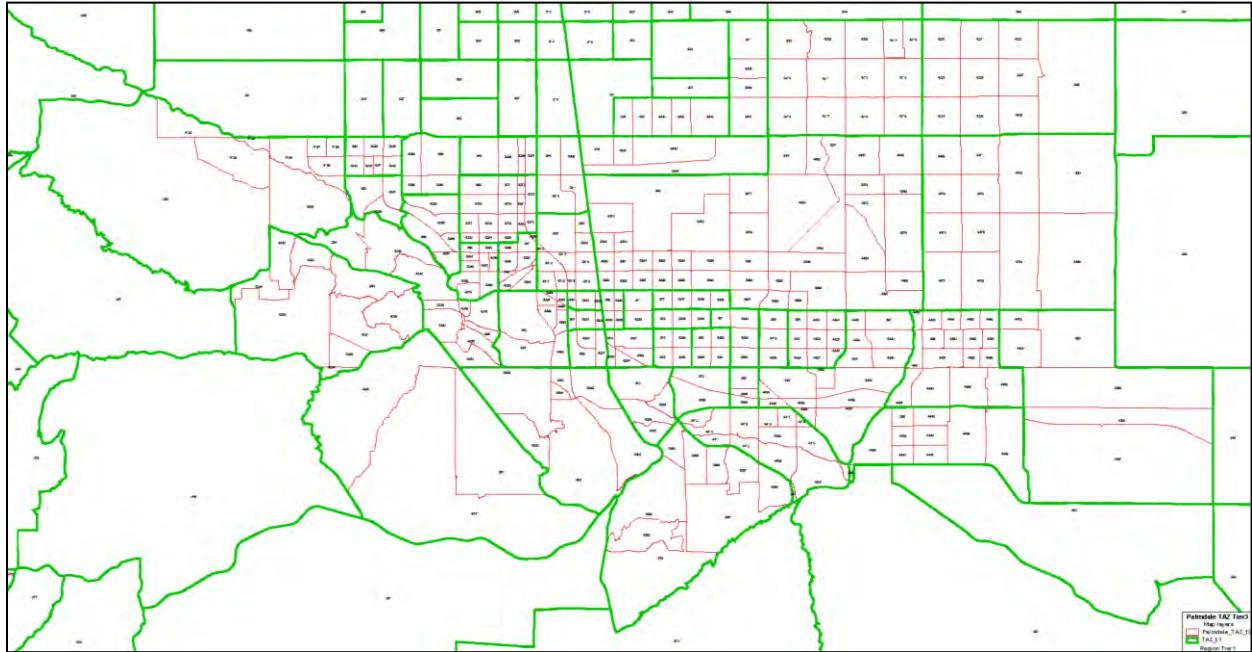
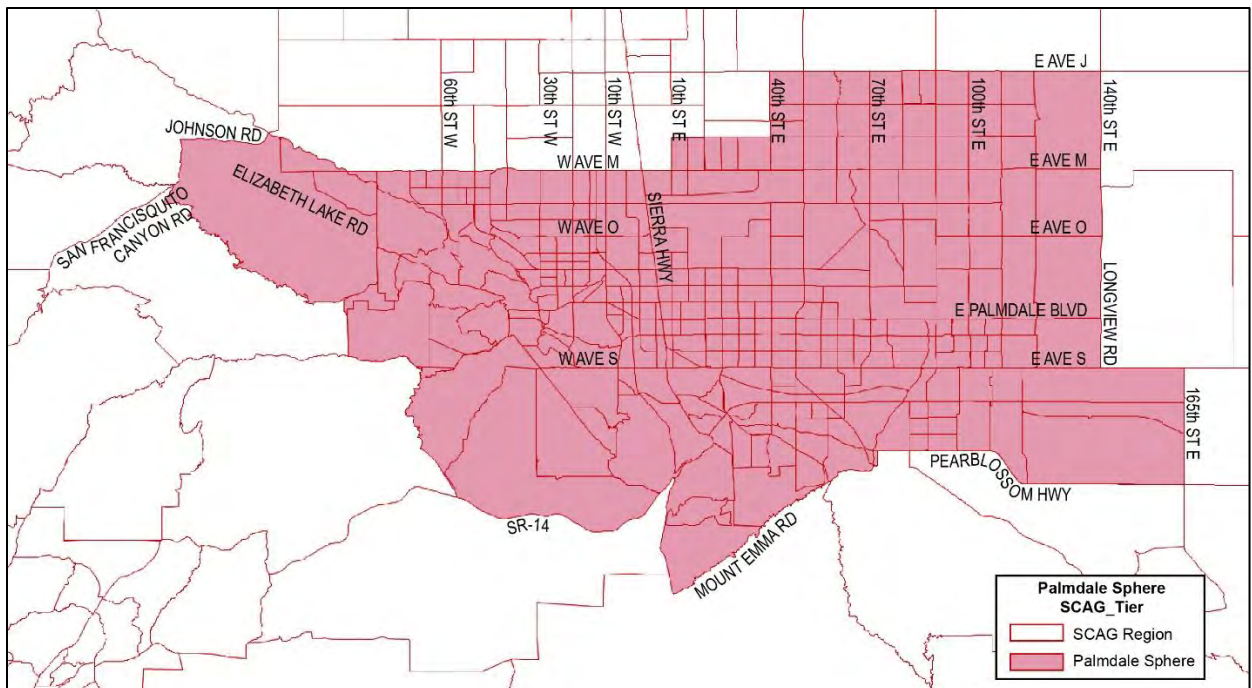


Figure 3: Palmdale Sphere of Influence



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The SCAG model comprises the entire SCAG region, which includes the counties of San Bernardino, Los Angeles, Ventura, Orange, Riverside, and Imperial. The Palmdale sphere of influence (SOI) is a very small part of the SCAG region, as shown in Table 1. The contribution of Palmdale SOI to the 2045 Base scenario for the region is 1.09 percent for population, 0.98 percent for households and 0.68 percent for employment. As such, it can be assumed that land use changes in the Palmdale SOI would have very little effect on the region.

**Table 1: Percentage of the Palmdale Sphere of Influence in the SCAG Region**

| District Name                     | 2017 Existing |              |              | 2045 Base    |              |              |
|-----------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|
|                                   | Population    | Households   | Employment   | Population   | Households   | Employment   |
| Palmdale SOI                      | 188,488       | 53,626       | 49,501       | 240,515      | 72,840       | 67,085       |
| Remainder of SCAG region          | 18,797,418    | 6,156,694    | 8,064,233    | 21,883,490   | 7,334,073    | 9,804,345    |
| Total                             | 18,985,906    | 6,210,320    | 8,113,734    | 22,124,005   | 7,406,913    | 9,871,430    |
| <b>Percent Share for Palmdale</b> | <b>0.99%</b>  | <b>0.86%</b> | <b>0.61%</b> | <b>1.09%</b> | <b>0.98%</b> | <b>0.68%</b> |

Most Palmdale trips primarily stay within Los Angeles County, with a small number traveling to nearby San Bernardino, Ventura, and Riverside counties. With the update of the socio-economic data for the Palmdale General Plan, the intent is to make Palmdale less of an exporter of trips, making it more self-sustainable, whereby more trips stay in Palmdale than leave Palmdale. As such, the socio-economic data outside the Palmdale SOI would have much less of an impact. The cities and entities across the SCAG region are developing future land use based on having both employment and population growth, leading to more trips staying within their jurisdiction to the extent possible. Applying standard growth rates across the region would not be possible because different cities have different assumptions for future growth. As such, the current land use data in the SCAG region would be more conservative and the growth is unlikely to be very different in the 5-year period. Like Palmdale, which strives to be less of an exporter of trips to other areas, primarily in Los Angeles County, other cities/agencies may also seek to reduce the exporting of trips. This would lead to the reduction of vehicle miles traveled (VMT) as required by the new SB 743 guidelines.

The SCAG model currently has the last horizon year as 2040, with a calibration year of 2012, and will be used for the SCAG region outside of the Palmdale SOI limits. It is always best to maintain consistency with the regional model to the extent possible. In addition, there is no basis for altering the land use for rest of the region which comprises 99 percent of the population.

The SCAG model was run for the following scenarios with updated land use within the Palmdale SOI:

- 2017 Existing:** The Palmdale SOI land use was updated based on input from the City, the four-step SCAG model procedures were run completely, and the trip tables were expanded to the Tier 3 zone system before performing the traffic assignments. The highway network assumptions are consistent with the SCAG regional assumptions.
- 2045 Base:** The Palmdale SOI land use was updated based on input from the City, the four-step SCAG model procedures were run completely, and the trip tables were expanded to the Tier 3 zone system before performing the traffic assignments. The highway network assumptions are consistent with the SCAG regional assumptions.

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- 2045 Base with High Desert Corridor Freeway (HDC):** The highway network was updated to include a proposed facility beginning at SR 14 and joining SR138/SR18 east of Longview Road. Traffic assignments were performed utilizing 2045 Base scenario trip tables. This scenario was run to illustrate the effects of the HDC facility on the Palmdale street system because the proposed HDC facility would be a major east–west freeway connecting Palmdale and Victorville. The HDC may not be built before 2050 or beyond as no funding sources are identified.
- 2045 Preferred Plan:** The Palmdale SOI land use was updated based on the 2045 Preferred Plan scenario assumptions. The four-step SCAG model procedures were run completely, and the trip tables were expanded to the Tier 3 zone system before performing the traffic assignments. This scenario also included the addition of High-Speed Rail (HSR) trips at the Palmdale Station prior to performing the traffic assignments. The highway network assumptions are consistent with the SCAG regional assumptions. In addition, the network was updated based on review and recommendations by the City of Palmdale.

Table 2 summarizes population, households and employment land use for the scenarios in the Palmdale SOI. The detailed land use by traffic analysis zones (TAZ) for the Palmdale SOI is provided in Appendix A.

**Table 2: Palmdale Sphere of Influence Land Use Comparisons**

|             | <b>2017 Existing</b> | <b>2045 Base</b> | <b>2045 Preferred Plan</b> |
|-------------|----------------------|------------------|----------------------------|
| Populations | 188,488              | 240,515          | 225,692                    |
| Households  | 53,626               | 72,840           | 70,618                     |
| Employment  | 49,501               | 67,085           | 74,804                     |

The analysis for each of the scenarios include the following within the Palmdale sphere of influence (SOI):

- Daily segment level of service for selected locations.
- Post-processed daily volumes for selected segments.
- Measures of effectiveness (MOEs) metrics, i.e., vehicle miles travelled (VMT), vehicle hours travelled (VHT), vehicle hours of delay (VHD) and congested speeds, will be reported from traffic assignments for the Palmdale SOI on the transportation network performance.
- Select zone will create a subset of the trip table with Palmdale SOI trips only, which in turn will be used to produce trip lengths, VMT and VHT by district (aggregations of TAZs). In addition, the assignment procedures will also produce the VMT and VHT on all links as part of the assignment process and is known as link-based. The results of the link-based and zone-based procedures will be similar, but not equal, as two different procedures are employed.
- Vehicle miles travelled analysis for SB 743 compliance, where SB 743 eliminates level of service (LOS) as the basis for determining significant transportation impacts under CEQA and provides a new performance metric—VMT. The zone-based VMT procedures will be used for these computations. Home-based work and home-based all trips will also be used to compute VMT and other statistics.
- Average trip lengths will be reported for trip origins.
- VMT per capita will be reported by trip purpose for trip origins.

## Existing Conditions

The network assumptions in the SCAG model used for the 2017 existing conditions scenario are consistent with the SCAG 2017 forecast year assumptions. The socio-economic data for the Palmdale SOI was updated with inputs from the City of Palmdale. The socio-economic data outside the Palmdale SOI is consistent with the SCAG assumptions for the region. The SCAG four-step model procedures were run with the updated land use covering the Palmdale SOI. Table 3 below lists the planning variable assumptions for the SCAG region.

**Table 3: 2017 Existing Socio-Economic Data**

| 2017 Existing                | Population        | Households       | Employment       |
|------------------------------|-------------------|------------------|------------------|
| Palmdale sphere              | 188,488           | 53,626           | 49,501           |
| Lancaster sphere             | 176,422           | 55,712           | 51,676           |
| High Desert region           | 39,685            | 15,711           | 3,952            |
| Ventura County               | 213,907           | 63,350           | 69,515           |
| Los Angeles County remainder | 9,759,145         | 3,275,180        | 4,411,709        |
| Orange County                | 3,200,193         | 1,045,270        | 1,666,324        |
| Riverside County             | 2,391,954         | 761,979          | 761,653          |
| San Bernardino County        | 2,148,780         | 660,273          | 740,722          |
| Imperial County              | 867,332           | 279,219          | 358,682          |
| Externals                    | 0                 | 0                | 0                |
| Seaport/airport              | 0                 | 0                | 0                |
| <b>Total Region</b>          | <b>18,985,906</b> | <b>6,210,320</b> | <b>8,113,734</b> |

Select zone traffic assignment procedures were performed on the zones within the Palmdale SOI to produce trips that were generated or attracted to the Palmdale SOI area only. All other trips were not counted as they were pass through trips. The daily average trip lengths for the Palmdale SOI only trips are shown in Table 4. The daily link-based VMT, vehicle hours traveled and the average speeds by facility types are shown in Table 5 for the Palmdale SOI only trips. The daily percent share of VMT for trips originating in the Palmdale SOI to all areas in the region, including Palmdale, is illustrated in Figure 4.

**Table 4: 2017 Existing Average Trip Length for Palmdale SOI Trips**

| From/To                 | Trip Length (II and IX*) (miles) | Percent Share of Trips |
|-------------------------|----------------------------------|------------------------|
| Palmdale sphere         | 4.25                             | 70.2%                  |
| Lancaster sphere        | 9.83                             | 15.6%                  |
| High Desert region      | 15.46                            | 2.9%                   |
| Imperial County         | 223.37                           | 0.0%                   |
| Los Angeles County      | 55.62                            | 7.8%                   |
| Orange County           | 105.28                           | 0.4%                   |
| Riverside County        | 97.28                            | 0.4%                   |
| San Bernardino County   | 62.41                            | 1.2%                   |
| Ventura County          | 75.29                            | 0.5%                   |
| Externals               | 60.99                            | 0.9%                   |
| Seaport/airport         | 60.05                            | 0.2%                   |
| <b>Weighted Average</b> | <b>11.87</b>                     | <b>100.0%</b>          |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.



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**Table 5: 2017 Existing Palmdale SOI (II, IX and XI\*) Daily, VMT, VHT, Average Speed by Facility**

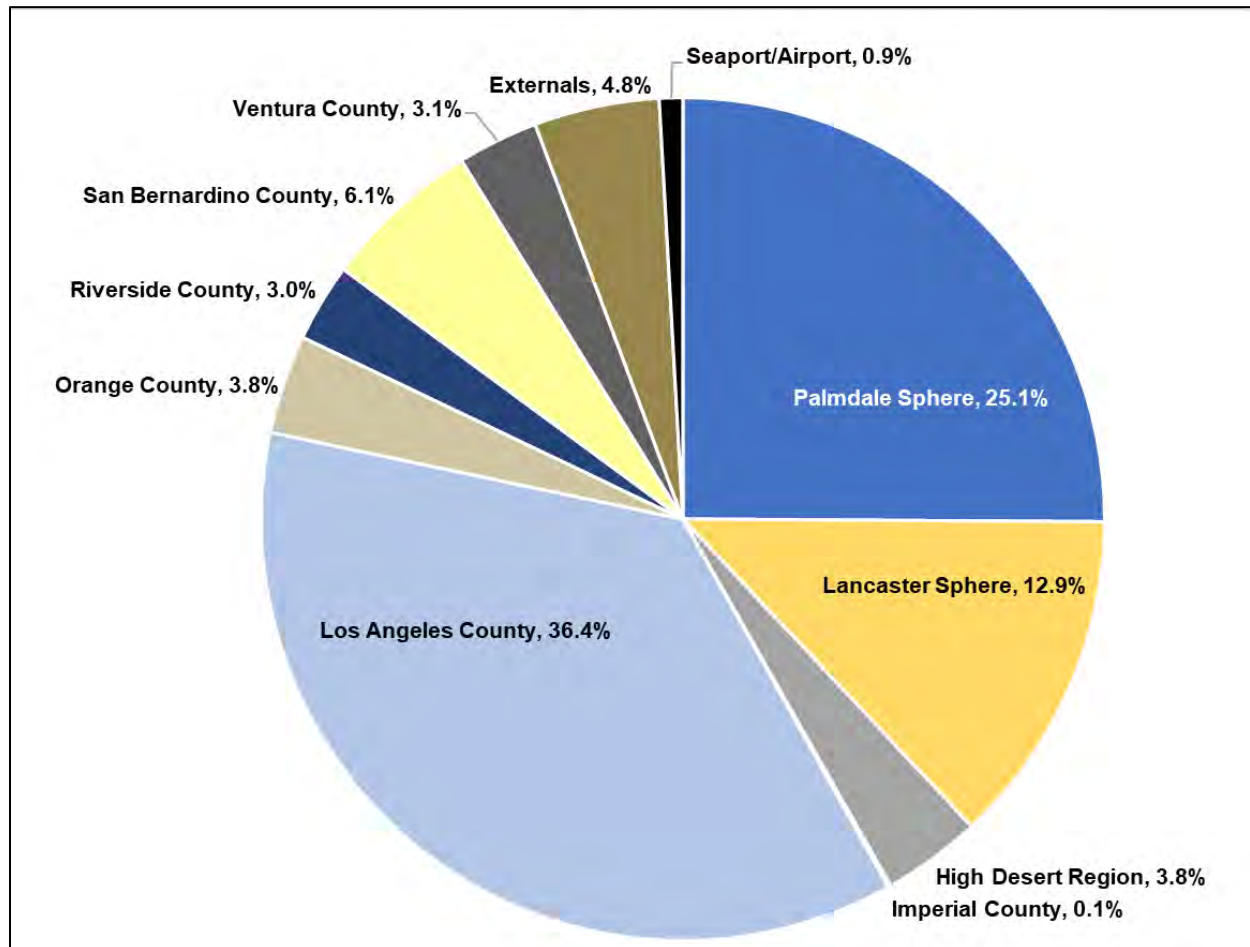
| Facility                          | VMT              | VHT            | Average Speed (mph) |
|-----------------------------------|------------------|----------------|---------------------|
| Freeways                          | 2,893,868        | 110,892        | 47.5                |
| HOT facilities                    | 11,431           | 364            | 54.4                |
| HOV facilities                    | 284,701          | 12,647         | 54.0                |
| Expressways/parkways              | 4,381            | 145            | 53.9                |
| Principal arterials               | 1,484,072        | 40,118         | 30.6                |
| Minor arterials                   | 1,631,560        | 42,584         | 31.7                |
| Major collectors                  | 1,067,379        | 29,211         | 25.1                |
| Minor connectors                  | 41,916           | 1,279          | 31.4                |
| Freeway ramps                     | 152,550          | 17,266         | 21.1                |
| Truck lanes only                  | 6,323            | 245            | 51.1                |
| Centroid connectors               | 450,545          | 17,702         | 24.2                |
| Total without centroid connectors | 7,578,181        | 254,752        | 37.1                |
| <b>Total of All Links</b>         | <b>8,028,726</b> | <b>272,454</b> | <b>35.9</b>         |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

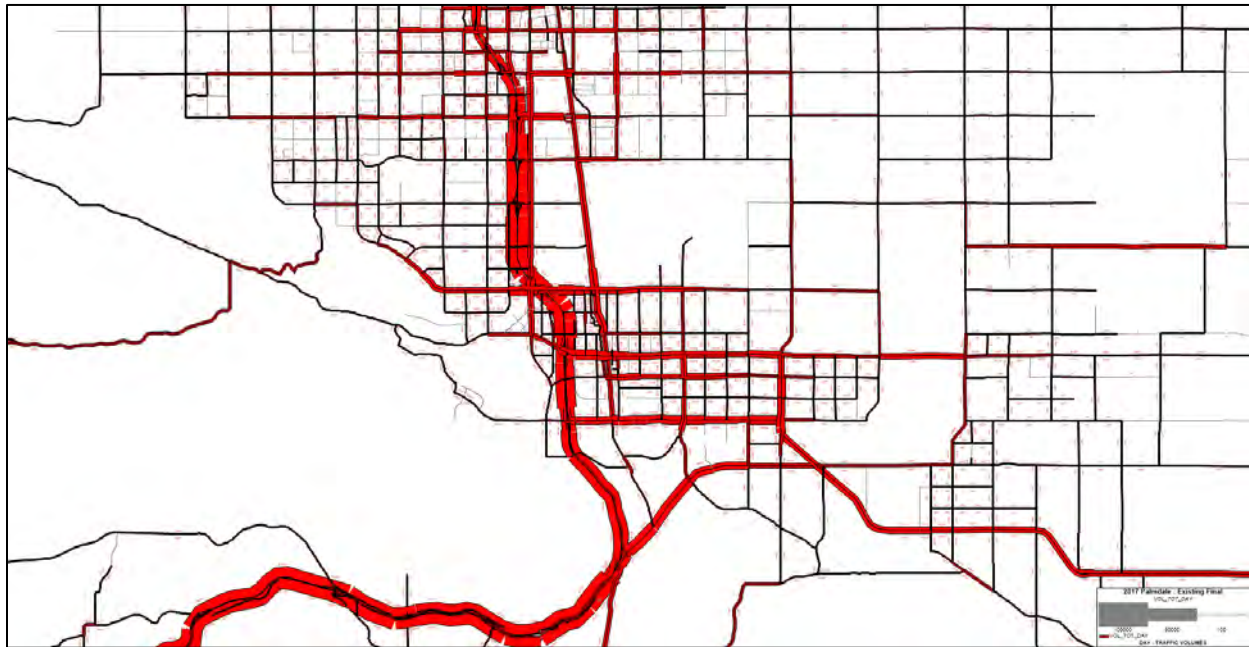
**Figure 4: 2017 Existing Daily VMT Share Originating in the Palmdale SOI**



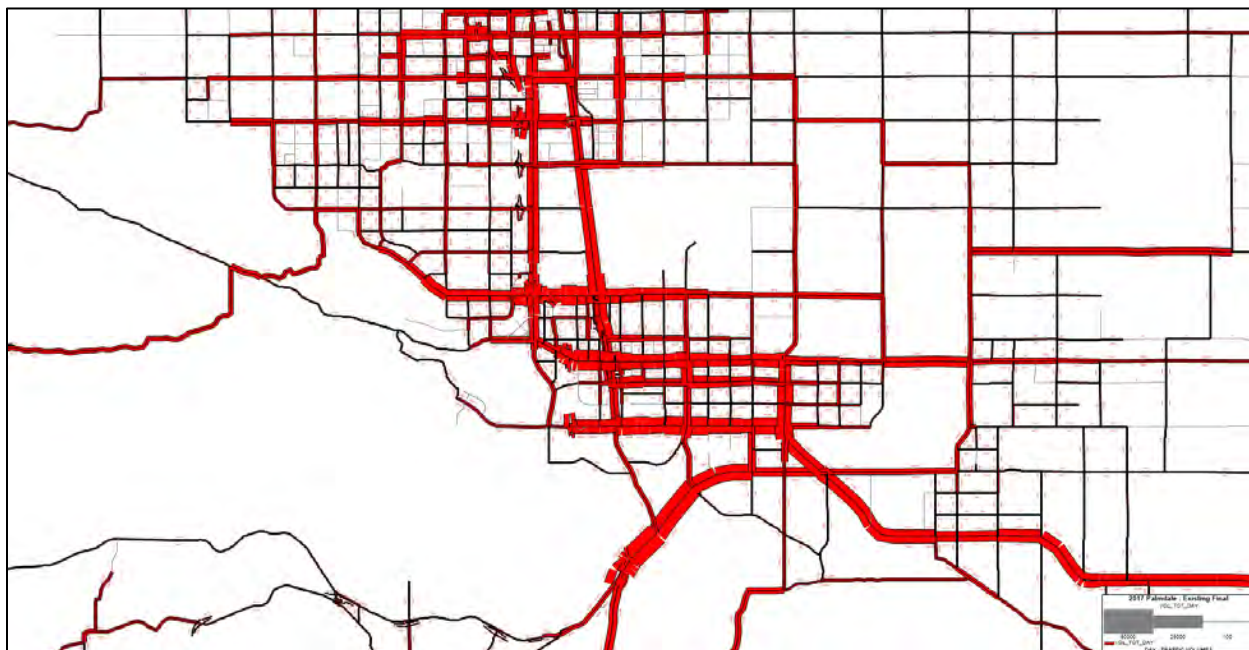
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Traffic assignments were performed to produce traffic volumes on the facilities inside and outside the Palmdale SOI. Traffic assignments are available for AM peak period, mid-day period, PM peak period, evening period, night period and daily. The daily traffic assignment volumes (band widths) are illustrated in Figure 5 (Figure 5b excludes SR 14).

**Figure 5: 2017 Existing Daily Assigned Traffic Volumes**



**a. 2017 Existing Daily Assigned Traffic Volumes with SR 14**



**b. 2017 Existing Daily Assigned Traffic Volumes without SR 14**

## LEVEL OF SERVICE DEFINITIONS AND STANDARDS

Assessment of the volume and level of operation of selected corridors in the region is conducted biennially through the County’s Congestion Management Program (CMP) process. In addition, other traffic volume data is collected by local agencies during other planning exercises and traffic studies conducted for development projects.

By statute, each CMP must include a performance element containing measures that evaluate current and future multimodal system performance for the movement of goods and people. The level of service indicators for the highway and roadway system is based on the volume of traffic for designated sections of roadway during a typical day and the practical vehicular capacity of that segment. These two measures for each monitored segment of the roadway system are expressed as a ratio. The volume-to-capacity ratio (V/C) is then converted to an alpha descriptor identifying operating conditions and expressed as a level of service, LOS A through LOS F. Level of service A identifies the best operating conditions along a section of roadway and is characterized by free-flow traffic, low volumes, and little or no restrictions on maneuverability. Level of service F characterizes forced traffic flow with high traffic densities, slow travel speeds, and often stop-and-go conditions. Level of service standards in the county can be set no lower than LOS E or no lower than the current level of service and V/C ratio if the level of service is already below LOS E. City of Palmdale has established LOS D as its criterion for an acceptable level of service.

Table 6, Level of Service Criteria, defines and describes the level of service criteria for roadway segments. Table 7 reports the model daily assignment volumes compared to the existing counts and the level of service at various segments. Table 7 also identifies the level of service for arterial roadway segments based on these criteria. In some locations, differences in model results are to be expected. All future volumes are post-processed to reflect sensitivity to model/count differences.

**Table 6: Level of Service Criteria**

| Level of Service | Interpretation   | Volume-to-Capacity Ratio |
|------------------|--|--------------------------|
| A                | Free-flow speeds prevail. Vehicles are almost unimpeded in their ability to maneuver within the traffic stream.  | 0.00–0.60                |
| B                | Reasonably free-flow speeds are maintained. The ability to maneuver within traffic is only slightly restricted.  | 0.61–0.70                |
| C                | Flow with speeds at or near free-flow speed of the roadway. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more care and vigilance on the part of the driver.     | 0.71–0.80                |
| D                | Speeds begin to decline slightly with increasing flows. In this range, density begins to increase somewhat more quickly with increasing flow. Freedom to maneuver within the traffic stream is noticeably limited. | 0.81–0.90                |
| E                | Operation at capacity with no usable gaps in the traffic stream. Any disruption to the traffic stream has little or no room to dissipate.  | 0.91–1.0                 |
| F                | Breakdown of the traffic flow with long queues of traffic. Unacceptable conditions.  | > 1.0                    |

Source: Los Angeles County Metropolitan Transit Authority 2003 Congestion Management Program.



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**Table 7: 2017 Existing Daily Segment Volumes**

| LINKID | Roadway Segments          |                                 | Lanes | Type of Arterial  | Capacity | 2017 Existing Counts |      |     | 2017 Existing Model |      |     |
|--------|---------------------------|---------------------------------|-------|-------------------|----------|----------------------|------|-----|---------------------|------|-----|
|        | Roadway                   | From/To                         |       |                   |          | 2-Way Count          | V/C  | LOS | 2017_Tot_Flow       | V/C  | LOS |
| 1001   | Columbia Way/Avenue M     | 10th Street W to Sierra Hwy     | 4     | Regional arterial | 36,000   | 23,348               | 0.65 | B   | 10,947              | 0.30 | A   |
| 1002   | Columbia Way/Avenue M     | Sierra Hwy to 10th Street E     | 4     | Regional arterial | 36,000   | 28,434               | 0.79 | C   | 18,061              | 0.50 | A   |
| 1003   | Columbia Way/Avenue M     | 10th Street E to 20th Street E  | 4     | Regional arterial | 36,000   | 17,513               | 0.49 | A   | 9,454               | 0.26 | A   |
| 1004   | Columbia Way/Avenue M     | 20th Street E to 30th Street E  | 4     | Regional arterial | 36,000   | 13,832               | 0.38 | A   | 5,558               | 0.15 | A   |
| 1005   | Columbia Way/Avenue M     | 30th Street E to 40th Street E  | 4     | Regional arterial | 36,000   | 7,475                | 0.21 | A   | 5,771               | 0.16 | A   |
| 1006   | Columbia Way/Avenue M     | 40th Street E to 50th Street    | 4     | Regional arterial | 36,000   | 10,559               | 0.29 | A   | 5,304               | 0.15 | A   |
| 1007   | Rancho Vista Ave/Avenue P | 50th Street W to Town Center Dr | 4     | Major arterial    | 36,000   | 16,758               | 0.47 | A   | 15,225              | 0.42 | A   |
| 1008   | Rancho Vista Ave/Avenue P | Town Center Dr to 30th Street W | 4     | Major arterial    | 36,000   | 20,985               | 0.58 | A   | 15,225              | 0.42 | A   |
| 1009   | Rancho Vista Ave/Avenue P | 30th Street W to 25th Street W  | 4     | Major arterial    | 36,000   | 22,457               | 0.62 | B   | 22,382              | 0.62 | B   |
| 1010   | Rancho Vista Ave/Avenue P | 25th Street W to 20th Street W  | 4     | Major arterial    | 36,000   | 27,509               | 0.76 | C   | 22,532              | 0.63 | B   |
| 1011   | Rancho Vista Ave/Avenue P | 20th Street W to 15th Street W  | 4     | Major arterial    | 36,000   | 26,453               | 0.73 | C   | 20,958              | 0.58 | A   |
| 1012   | Rancho Vista Ave/Avenue P | 15th Street to 10th Street W    | 6     | Major arterial    | 54,000   | 41,536               | 0.77 | C   | 36,131              | 0.67 | B   |
| 1013   | Rancho Vista Ave/Avenue P | 10th Street W to SR 14          | 6     | Major arterial    | 54,000   | 35,290               | 0.65 | B   | 33,055              | 0.61 | B   |
| 1014   | Rancho Vista Ave/Avenue P | SR 14 to Country Club Dr        | 4     | Major arterial    | 36,000   | 23,332               | 0.65 | B   | 25,923              | 0.72 | C   |
| 1015   | Rancho Vista Ave/Avenue P | Country Club Dr to Division St  | 4     | Major arterial    | 36,000   | 26,481               | 0.74 | C   | 39,327              | 1.09 | F   |
| 1016   | Rancho Vista Ave/Avenue P | Division St to Sierra Hwy       | 4     | Major arterial    | 36,000   | 22,334               | 0.62 | B   | 36,838              | 1.02 | F   |
| 1017   | East Avenue P             | Sierra Hwy to 8th Street E      | 4     | Major arterial    | 36,000   | 33,863               | 0.94 | E   | 27,833              | 0.77 | C   |
| 1018   | East Avenue P             | 8th Street E to 15th Street E   | 4     | Major arterial    | 36,000   | 24,509               | 0.68 | B   | 27,833              | 0.77 | C   |
| 1019   | East Avenue P             | 15th Street E to 20th Street E  | 4     | Major arterial    | 36,000   | 24,973               | 0.69 | B   | 25,851              | 0.72 | C   |
| 1020   | East Avenue P             | 20th Street E to 25th Street E  | 4     | Major arterial    | 36,000   | 18,699               | 0.52 | A   | 24,985              | 0.69 | B   |
| 1021   | East Avenue P             | 25th Street E to 30th Street E  | 4     | Major arterial    | 36,000   | 14,695               | 0.41 | A   | 18,093              | 0.50 | A   |
| 1022   | Avenue Q                  | Trade Center Dr to 5th Street W | 4     | Regional arterial | 36,000   | 2,216                | 0.06 | A   | 1,660               | 0.05 | A   |
| 1023   | Avenue Q                  | Division Street to 6th Street E | 2     | Major arterial    | 18,000   | 3,815                | 0.21 | A   | 3,707               | 0.21 | A   |
| 1024   | Avenue Q                  | Sierra Hwy to 10th Street E     | 2     | Major arterial    | 18,000   | 9,447                | 0.52 | A   | 12,752              | 0.71 | C   |
| 1025   | Avenue Q                  | 10th Street E to 20th Street E  | 2     | Major arterial    | 18,000   | 8,323                | 0.46 | A   | 10,201              | 0.57 | A   |
| 1026   | Avenue Q                  | 20th Street E to 30th Street E  | 2     | Major arterial    | 18,000   | 7,106                | 0.39 | A   | 9,105               | 0.51 | A   |
| 1027   | Avenue Q                  | 30th Street E to 40th Street E  | 2     | Major arterial    | 18,000   | 4,960                | 0.28 | A   | 6,277               | 0.35 | A   |
| 1028   | Elizabeth Lake Rd         | 25th Street W to 20th Street W  | 4     | Major arterial    | 36,000   | 13,937               | 0.39 | A   | 7,118               | 0.20 | A   |
| 1029   | Elizabeth Lake Rd         | 20th Street W to 15th Street W  | 4     | Regional arterial | 36,000   | 13,828               | 0.38 | A   | 13,606              | 0.38 | A   |
| 1030   | Elizabeth Lake Rd         | 15th Street W to 10th Street W  | 4     | Regional arterial | 36,000   | 18,930               | 0.53 | A   | 13,412              | 0.37 | A   |

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**Table 7: 2017 Existing Daily Segment Volumes**

| LINKID | Roadway Segments |                                   | Lanes | Type of Arterial  | Capacity | 2017 Existing Counts |      |     | 2017 Existing Model |      |     |
|--------|------------------|-----------------------------------|-------|-------------------|----------|----------------------|------|-----|---------------------|------|-----|
|        | Roadway          | From/To                           |       |                   |          | 2-Way Count          | V/C  | LOS | 2017_Tot_Flow       | V/C  | LOS |
| 1031   | Palmdale Blvd    | 10th Street W to Trade Center Dr  | 4     | Regional arterial | 36,000   | 17,408               | 0.48 | A   | 19,413              | 0.54 | A   |
| 1032   | Palmdale Blvd    | Trade Center Dr to 5th Street W   | 4     | Regional arterial | 36,000   | 16,548               | 0.46 | A   | 14,374              | 0.40 | A   |
| 1033   | Palmdale Blvd    | 5th Street W to State Route 14    | 4     | Regional arterial | 36,000   | 27,366               | 0.76 | C   | 24,034              | 0.67 | B   |
| 1034   | Palmdale Blvd    | Division Street to 5th St E       | 6     | Major arterial    | 54,000   | 25,175               | 0.47 | A   | 40,613              | 0.75 | C   |
| 1035   | Palmdale Blvd    | 5th Street E to 10th Street E     | 4     | Major arterial    | 36,000   | 25,257               | 0.70 | C   | 34,556              | 0.96 | E   |
| 1036   | Palmdale Blvd    | 10th Street E to 15th Street E    | 4     | Major arterial    | 36,000   | 25,869               | 0.72 | C   | 31,975              | 0.89 | D   |
| 1037   | Palmdale Blvd    | 15th Street E to 20th Street E    | 4     | Major arterial    | 36,000   | 19,223               | 0.53 | A   | 27,772              | 0.77 | C   |
| 1038   | Palmdale Blvd    | 20th Street E to 25th Street E    | 4     | Major arterial    | 36,000   | 23,470               | 0.65 | B   | 28,412              | 0.79 | C   |
| 1040   | Palmdale Blvd    | 40th Street E to 47th Street E    | 4     | Major arterial    | 36,000   | 18,458               | 0.51 | A   | 29,731              | 0.83 | D   |
| 1041   | Palmdale Blvd    | 50th Street E to 60th Street E    | 4     | Major arterial    | 36,000   | 14,147               | 0.39 | A   | 16,795              | 0.47 | A   |
| 1042   | Palmdale Blvd    | 70th Street E to 80th Street E    | 2     | Major arterial    | 18,000   | 16,681               | 0.93 | E   | 21,759              | 1.21 | F   |
| 1043   | E Avenue R       | Sierra Hwy to 10th Street E       | 4     | Major arterial    | 36,000   | 19,490               | 0.54 | A   | 20,337              | 0.56 | A   |
| 1044   | E Avenue R       | 10th Street E to 20th Street E    | 4     | Major arterial    | 36,000   | 18,495               | 0.51 | A   | 23,916              | 0.66 | B   |
| 1045   | E Avenue R       | 20th Street E to 30th Street E    | 4     | Major arterial    | 36,000   | 18,408               | 0.51 | A   | 16,169              | 0.45 | A   |
| 1046   | E Avenue R       | 30th Street E to 40th Street E    | 3     | Major arterial    | 27,000   | 14,851               | 0.55 | A   | 23,278              | 0.86 | D   |
| 1047   | E Avenue R       | 40th Street E to 47th Street E    | 4     | Major arterial    | 36,000   | 16,231               | 0.45 | A   | 13,706              | 0.38 | A   |
| 1048   | E Avenue R       | 47th Street E to 60th Street E    | 4     | Major arterial    | 36,000   | 15,158               | 0.42 | A   | 4,970               | 0.14 | A   |
| 1049   | E Avenue R       | 60th Street E to 70th Street E    | 4     | Major arterial    | 36,000   | 5,811                | 0.16 | A   | 1,285               | 0.04 | A   |
| 1050   | Avenue S         | Tovey Avenue to Tierra Subida Ave | 4     | Major arterial    | 36,000   | 9,346                | 0.26 | A   | 6,971               | 0.19 | A   |
| 1051   | Avenue S         | Tierra Subida Ave to SR 14        | 4     | Major arterial    | 36,000   | 14,027               | 0.39 | A   | 7,099               | 0.20 | A   |
| 1052   | Avenue S         | SR 14 to 5th Street E             | 4     | Major arterial    | 36,000   | 13,190               | 0.37 | A   | 27,924              | 0.78 | C   |
| 1053   | Avenue S         | 5th Street E to Sierra Hwy        | 4     | Major arterial    | 36,000   | 25,828               | 0.72 | C   | 27,339              | 0.76 | C   |
| 1054   | Avenue S         | Sierra Hwy to 10th Street E       | 4     | Major arterial    | 36,000   | 32,170               | 0.89 | D   | 37,784              | 1.05 | F   |
| 1055   | Avenue S         | 10th Street E to 20th Street E    | 4     | Major arterial    | 36,000   | 29,830               | 0.83 | D   | 35,288              | 0.98 | E   |
| 1056   | Avenue S         | 20th Street E to 25th Street E    | 4     | Major arterial    | 36,000   | 30,323               | 0.84 | D   | 35,328              | 0.98 | E   |
| 1057   | Avenue S         | 25th Street E to 30th Street E    | 4     | Major arterial    | 36,000   | 29,058               | 0.81 | D   | 35,702              | 0.99 | E   |
| 1058   | Avenue S         | 30th Street E to 35th Street E    | 6     | Major arterial    | 54,000   | 24,137               | 0.45 | A   | 28,809              | 0.53 | A   |
| 1059   | Avenue S         | 35th Street E to 40th Street E    | 6     | Major arterial    | 54,000   | 23,612               | 0.44 | A   | 29,185              | 0.54 | A   |
| 1060   | Avenue S         | 40th Street E to 47th Street E    | 6     | Major arterial    | 54,000   | 23,867               | 0.44 | A   | 33,374              | 0.62 | B   |
| 1061   | Avenue S         | 47th Street E to 55th Street E    | 4     | Major arterial    | 36,000   | 21,305               | 0.59 | A   | 11,417              | 0.32 | A   |

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Table 7: 2017 Existing Daily Segment Volumes

| LINKID | Roadway Segments                |                                    | Lanes | Type of Arterial   | Capacity | 2017 Existing Counts |      |     | 2017 Existing Model |      |     |
|--------|---------------------------------|------------------------------------|-------|--------------------|----------|----------------------|------|-----|---------------------|------|-----|
|        | Roadway                         | From/To                            |       |                    |          | 2-Way Count          | V/C  | LOS | 2017_Tot_Flow       | V/C  | LOS |
| 1062   | Pearblossom Hwy/Avenue T        | Sierra Hwy to 25th Street E        | 4     | Regional arterial  | 36,000   | 48,960               | 1.36 | F   | 40,919              | 1.14 | F   |
| 1063   | Pearblossom Hwy/Avenue T        | 25th Street E to 40th Street E     | 4     | Regional arterial  | 36,000   | 40,419               | 1.12 | F   | 32,686              | 0.91 | E   |
| 1064   | Pearblossom Hwy/Avenue T        | 40th Street E to 47th Street E     | 4     | Regional arterial  | 36,000   | 22,788               | 0.63 | B   | 18,197              | 0.51 | A   |
| 1065   | Pearblossom Hwy/Avenue T        | 47th Street E to Fort Tejon Road   | 4     | Regional arterial  | 36,000   | 22,898               | 0.64 | B   | 18,197              | 0.51 | A   |
| 1066   | Pearblossom Hwy/Avenue T        | Fort Tejon Road to 70th Street E   | 4     | Regional arterial  | 36,000   | 13,027               | 0.36 | A   | 18,197              | 0.51 | A   |
| 1067   | 10th Street W/Tierra Subida Ave | W Avenue M to W Avenue N           | 4     | Regional arterial  | 36,000   | 15,186               | 0.42 | A   | 21,879              | 0.61 | B   |
| 1068   | 10th Street W/Tierra Subida Ave | W Avenue N to W Avenue O           | 4     | Regional arterial  | 36,000   | 19,402               | 0.54 | A   | 21,538              | 0.60 | A   |
| 1069   | 10th Street W/Tierra Subida Ave | W Avenue O to SR 14                | 4     | Regional arterial  | 36,000   | 17,627               | 0.49 | A   | 20,532              | 0.57 | A   |
| 1070   | 10th Street W/Tierra Subida Ave | SR 14 to Rancho Vista Blvd         | 6     | Regional arterial  | 54,000   | 35,324               | 0.65 | B   | 33,268              | 0.62 | B   |
| 1071   | 10th Street W/Tierra Subida Ave | Rancho Vista Blvd to Technology Dr | 6     | Regional arterial  | 54,000   | 31,954               | 0.59 | A   | 23,914              | 0.44 | A   |
| 1072   | 10th Street W/Tierra Subida Ave | Technology Dr to W Palmdale Blvd   | 5     | Regional arterial  | 45,000   | 39,039               | 0.87 | D   | 20,004              | 0.44 | A   |
| 1073   | 10th Street W/Tierra Subida Ave | W Palmdale Blvd to Rayburn Rd      | 4     | Major arterial     | 36,000   | 16,569               | 0.46 | A   | 12,169              | 0.34 | A   |
| 1074   | Sierra Hwy                      | Columbia Way to E Avenue N         | 4     | Regional arterial  | 36,000   | 25,408               | 0.71 | C   | 23,325              | 0.65 | B   |
| 1075   | Sierra Hwy                      | E Avenue N to E Avenue O           | 4     | Regional arterial  | 36,000   | 27,037               | 0.75 | C   | 24,702              | 0.69 | B   |
| 1076   | Sierra Hwy                      | E Avenue O to E Avenue P           | 4     | Regional arterial  | 36,000   | 32,133               | 0.89 | D   | 25,292              | 0.70 | C   |
| 1077   | Sierra Hwy                      | E Avenue P to E Avenue Q           | 4     | Major arterial     | 36,000   | 14,366               | 0.40 | A   | 27,740              | 0.77 | C   |
| 1078   | Sierra Hwy                      | E Avenue Q to Palmdale Blvd        | 4     | Major arterial     | 36,000   | 15,176               | 0.42 | A   | 15,554              | 0.43 | A   |
| 1079   | Sierra Hwy                      | Palmdale Blvd to E Avenue R        | 4     | Major arterial     | 36,000   | 9,993                | 0.28 | A   | 14,783              | 0.41 | A   |
| 1080   | Sierra Hwy                      | E Avenue R to E Avenue S           | 4     | Major arterial     | 36,000   | 7,289                | 0.20 | A   | 16,575              | 0.46 | A   |
| 1081   | Sierra Hwy                      | E Avenue S to Pearblossom Hwy      | 4     | Major arterial     | 36,000   | 8,070                | 0.22 | A   | 8,009               | 0.22 | A   |
| 1082   | 10th Street E                   | E Avenue P to E Avenue Q           | 2     | Major arterial     | 18,000   | 2,357                | 0.13 | A   | 712                 | 0.04 | A   |
| 1083   | 10th Street E                   | E Avenue Q to E Palmdale Blvd      | 4     | Major arterial     | 36,000   | 5,732                | 0.16 | A   | 1,179               | 0.03 | A   |
| 1084   | 10th Street E                   | E. Palmdale Blvd to Avenue R       | 2     | Secondary arterial | 18,000   | 5,756                | 0.32 | A   | 9,545               | 0.53 | A   |
| 1085   | 10th Street E                   | Avenue R to Avenue S1              | 2     | Secondary arterial | 18,000   | 3,898                | 0.22 | A   | 2,907               | 0.16 | A   |
| 1086   | 20th Street E                   | E Avenue P to E Avenue Q           | 2     | Secondary arterial | 18,000   | 4,738                | 0.26 | A   | 868                 | 0.05 | A   |
| 1087   | 20th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | Secondary arterial | 18,000   | 7,760                | 0.43 | A   | 429                 | 0.02 | A   |
| 1088   | 20th Street E                   | Palmdale Blvd to E Avenue R        | 4     | Secondary arterial | 36,000   | 13,063               | 0.36 | A   | 1,453               | 0.04 | A   |
| 1089   | 20th Street E                   | E Avenue R to E Avenue S           | 4     | Secondary arterial | 36,000   | 12,215               | 0.34 | A   | 1,724               | 0.05 | A   |
| 1090   | 25th Street E                   | E Avenue P to E Avenue Q           | 2     | Major arterial     | 18,000   | 4,102                | 0.23 | A   | 9,277               | 0.52 | A   |
| 1091   | 25th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | Major arterial     | 18,000   | 6,948                | 0.39 | A   | 12,727              | 0.71 | C   |

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**Table 7: 2017 Existing Daily Segment Volumes**

| LINKID                       | Roadway Segments                        |                                  | Lanes | Type of Arterial  | Capacity | 2017 Existing Counts |      |            | 2017 Existing Model |      |            |            |
|------------------------------|---|----------------------------------|-------|-------------------|----------|----------------------|------|------------|---------------------|------|------------|------------|
|                              | Roadway                                 | From/To                          |       |                   |          | 2-Way Count          | V/C  | LOS        | 2017_Tot_Flow       | V/C  | LOS        |            |
| 1092                         | 25th Street E                           | Palmdale Blvd to E Avenue R      | 4     | Major arterial    | 36,000   | 12,851               | 0.36 | A          | 23,475              | 0.65 | B          |            |
| 1093                         | 25th Street E                           | E Avenue R to E Avenue S         | 4     | Major arterial    | 36,000   | 16,629               | 0.46 | A          | 15,749              | 0.44 | A          |            |
| 1094                         | 25th Street E                           | E Avenue S to Pearblossom Hwy    | 4     | Major arterial    | 36,000   | 14,269               | 0.40 | A          | 22,843              | 0.63 | B          |            |
| 1095                         | 30th Street E                           | E Avenue P to E Avenue Q         | 2     | Major arterial    | 18,000   | 5,987                | 0.33 | A          | 3,708               | 0.21 | A          |            |
| 1096                         | 30th Street E                           | E Avenue Q to Palmdale Blvd      | 2     | Major arterial    | 18,000   | 6,083                | 0.34 | A          | 2,743               | 0.15 | A          |            |
| 1097                         | 30th Street E                           | Palmdale Blvd to E Avenue R      | 4     | Major arterial    | 36,000   | 7,721                | 0.21 | A          | 1,295               | 0.04 | A          |            |
| 1098                         | 30th Street E                           | E Avenue R to E Avenue S         | 4     | Major arterial    | 36,000   | 8,871                | 0.25 | A          | 2,452               | 0.07 | A          |            |
| 1099                         | 40th Street E                           | E Avenue P to E Avenue Q         | 2     | Major arterial    | 18,000   | 5,610                | 0.31 | A          | 5,769               | 0.32 | A          |            |
| 1100                         | 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 2     | Major arterial    | 18,000   | 7,185                | 0.40 | A          | 6,713               | 0.37 | A          |            |
| 1101                         | 40th Street E                           | E Palmdale Blvd to E Avenue R    | 3     | Major arterial    | 27,000   | 9,892                | 0.37 | A          | 5,754               | 0.21 | A          |            |
| 1102                         | 40th Street E                           | E Avenue R to E Avenue S         | 3     | Major arterial    | 27,000   | 9,037                | 0.33 | A          | 3,635               | 0.13 | A          |            |
| 1103                         | 40th Street E                           | E Avenue S to Sierra Hwy         | 2     | Major arterial    | 18,000   | 10,505               | 0.58 | A          | 13,530              | 0.75 | C          |            |
| 1104                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 2     | Major arterial    | 18,000   | 18,016               | 1.00 | F          | 10,381              | 0.58 | A          |            |
| 1105                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 2     | Major arterial    | 18,000   | 12,874               | 0.72 | C          | 9,551               | 0.53 | A          |            |
| 1106                         | 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 4     | Regional arterial | 36,000   | 25,702               | 0.71 | C          | 23,134              | 0.64 | B          |            |
| 1107                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 4     | Regional arterial | 36,000   | 26,908               | 0.75 | C          | 32,008              | 0.89 | D          |            |
| 1108                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 4     | Regional arterial | 36,000   | 19,854               | 0.55 | A          | 28,501              | 0.79 | C          |            |
| 1109                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 5     | Regional arterial | 45,000   | 24,514               | 0.54 | A          | 35,084              | 0.78 | C          |            |
| 1110                         | 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearblossom Hwy      | 4     | Regional arterial | 36,000   | 24,367               | 0.68 | B          | 25,270              | 0.70 | C          |            |
| 1111                         | 47th Street E/50th Street E/Ft Tejon Rd | Pearblossom Hwy to E Avenue T-8  | 4     | Regional arterial | 36,000   | 21,099               | 0.59 | A          | 27,236              | 0.76 | C          |            |
| 1120                         | Technology Dr                           | 10th Street W to Trade Center Dr | 4     | Major arterial    | 36,000   | 7,205                | 0.20 | A          | 3,852               | 0.11 | A          |            |
| 1121                         | Technology Dr                           | 5th Street W to Division St      | 4     | Major arterial    | 36,000   | 7,574                | 0.21 | A          | 5,113               | 0.14 | A          |            |
| 1122                         | Technology Dr                           | Division St to Sierra Hwy        | 4     | Major arterial    | 36,000   | 7,805                | 0.22 | A          | 8,902               | 0.25 | A          |            |
| <b>Total LOS A through D</b> |   |                                  |       |                   |          |                      |      | <b>108</b> |                     |      | <b>103</b> |            |
| <b>Total LOS E</b>           |   |                                  |       |                   |          |                      |      |            | <b>2</b>            |      |            | <b>5</b>   |
| <b>Total LOS F</b>           |   |                                  |       |                   |          |                      |      |            | <b>3</b>            |      |            | <b>5</b>   |
| <b>Total LOS Reported</b>    |   |                                  |       |                   |          |                      |      | <b>113</b> |                     |      |            | <b>113</b> |

**Traffic Report**

Table 8 reports the link-based VMT, VHT, VHD, and average speeds by facility in the Palmdale SOI for all trips regardless of trip origin or destination (including pass-through trips).

**Table 8: 2017 Existing Palmdale Sphere of Influence VMT/VHT by Facility Type for All Trips**

| Facility               | AM Peak        |               |             |              | PM Peak          |               |             |              | Daily            |                |             |              |
|------------------------|----------------|---------------|-------------|--------------|------------------|---------------|-------------|--------------|------------------|----------------|-------------|--------------|
|                        | VMT            | VHT           | Speed       | Delay        | VMT              | VHT           | Speed       | Delay        | VMT              | VHT            | Speed       | Delay        |
| Freeways               | 250,250        | 4,517         | 55.4        | 942          | 290,275          | 4,600         | 63.1        | 453          | 1,084,421        | 17,015         | 63.7        | 1,523        |
| HOT facilities         | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| HOV facilities         | 50,301         | 786           | 64.0        | 68           | 55,530           | 821           | 67.6        | 28           | 118,683          | 1,791          | 66.3        | 95           |
| Expressways/parkways   | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| Principal arterials    | 183,392        | 4,673         | 39.2        | 624          | 286,587          | 7,374         | 38.9        | 1,021        | 1,023,896        | 24,923         | 41.1        | 2,281        |
| Minor arterials        | 220,022        | 5,389         | 40.8        | 353          | 359,485          | 8,914         | 40.3        | 669          | 1,173,770        | 28,367         | 41.4        | 1,369        |
| Major collectors       | 99,797         | 2,629         | 38.0        | 233          | 145,238          | 3,757         | 38.7        | 273          | 463,447          | 11,700         | 39.6        | 600          |
| Minor collectors       | 1,845          | 51            | 36.3        | 1            | 3,196            | 92            | 34.8        | 4            | 9,393            | 270            | 34.8        | 8            |
| Freeway ramps          | 11,323         | 630           | 18.0        | 288          | 16,345           | 830           | 19.7        | 345          | 57,372           | 2,626          | 21.9        | 907          |
| Truck lanes only       | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| Centroid connectors    | 64,106         | 2,479         | 25.9        | 0            | 103,593          | 4,022         | 25.8        | 0            | 344,572          | 13,394         | 25.7        | 0            |
| <b>Total—All Links</b> | <b>881,037</b> | <b>21,155</b> | <b>41.6</b> | <b>2,509</b> | <b>1,260,249</b> | <b>30,411</b> | <b>41.4</b> | <b>2,792</b> | <b>4,275,553</b> | <b>100,085</b> | <b>42.7</b> | <b>6,783</b> |

**SUMMARY**

Daily trips are defined as having an origin, destination or both within the Palmdale SOI and do not include pass-through trips. The Palmdale trips generate a VMT of 8,028,726 and a VHT of 272,454 on all the roadway way facilities within the SCAG region. The Palmdale SOI only accounts for 25.1 percent of the total VMT generated, Lancaster accounts for 12.9 percent, High Desert region accounts for 3.8 percent, rest of Los Angeles County accounts for 36.4 percent.

The average trip length for trips originating and staying within the Palmdale SOI is 4.25 miles. This constitutes 70.2 percent of all the Palmdale trips. The average trip length for trips originating in Palmdale SOI and having a destination anywhere in the SCAG region including itself is 11.87 miles.

Based on the 2017 existing counts, the daily segment-based LOS results show the number of segments operating at LOS E is two and LOS F is three and accounts for 1.8 percent and 2.7 percent, respectively, of all the segments analyzed. For the 2017 existing model, the daily segment-based LOS results show the number of segments operating at LOS E is five and LOS F is five and accounts for 4.4 percent and 4.4 percent, respectively, of all the segments analyzed.

The Palmdale transportation network as a “system,” which includes all roadway facilities within the Palmdale SOI, generates 4,275,533 VMT, 100,085 VHT and 6,783 VHD daily. This accounts for all trips, including pass through trips, using the highway network within the Palmdale SOI.

## Future Conditions

### ROADWAY IMPROVEMENTS

The future highway network is consistent with the SCAG model assumptions for the forecast year 2040, which is the farthest out horizon year available with the SCAG regional model. The 2040 horizon year is the basis for the future year 2045 forecasts for the Palmdale General Plan scenarios, with several roadway improvements additionally assumed for the 2045 horizon year. These include (noting some of them may have already been upgraded):

- Avenue P/Rancho Vista Boulevard
  - Three lanes per direction between west of 30th Street West and Division Street
  - Two lanes per direction between Division Street and 20th Street East
  - One lane per direction between 20th Street East and 50th Street East.
- Technology Drive/East Avenue P8
  - Two lanes per direction between Sierra Highway and 20th Street East.
- East Avenue R
  - Two lanes per direction between Sierra Highway and 70th Street East.
- East Avenue S
  - Three lanes per direction between 30th Street and 47th Street East.
- East Avenue Q
  - Connection between 6th Street and Sierra Highway to facilitate better access to the proposed Palmdale High-Speed Rail Station

The 2045 Preferred Plan also included the Palmdale High-Speed Rail Station boardings, which are integrated into the traffic assignment procedures. Daily boarding for the 2045 scenarios are reported to be 5,600 riders one way, per the Transportation Technical Report published by the California High-Speed Rail Authority Palmdale to Burbank Project Section and dated March 2019.

Following a review by the City of Palmdale, the 2045 Preferred Plan scenario highway network was updated based on their recommendations.

Figure 6 illustrates the future roadway network in Palmdale, including a general alignment for the proposed High Desert Corridor freeway.

**Figure 6. Future Roadway Network**

*Placeholder*

## 2045 BASE

The 2045 Base scenario used the SCAG model forecast year 2040 dataset, and the network assumptions are consistent with the RTP assumptions. The 2045 socio-economic data for the Palmdale SOI was updated with inputs from the City of Palmdale. The socio-economic data outside the Palmdale SOI is consistent with the SCAG assumptions for the region for the year 2040. The SCAG four-step model procedures were run with the updated land use in the Palmdale SOI. The Table 9 lists the planning variable assumptions for the region.

**Table 9: 2045 Base Socio-Economic Forecast**

|                              | Population        | Households       | Employment       |
|------------------------------|-------------------|------------------|------------------|
| Palmdale sphere              | 240,515           | 72,840           | 67,085           |
| Lancaster sphere             | 218,843           | 69,963           | 59,678           |
| High Desert region           | 40,845            | 14,409           | 5,030            |
| Ventura County               | 282,025           | 92,482           | 101,050          |
| Los Angeles County remainder | 11,001,144        | 3,783,739        | 5,117,195        |
| Orange County                | 3,460,381         | 1,152,340        | 1,898,952        |
| Riverside County             | 3,183,378         | 1,054,557        | 1,174,500        |
| San Bernardino County        | 2,731,308         | 854,360          | 1,028,132        |
| Imperial County              | 965,566           | 312,223          | 419,808          |
| Externals                    | 0                 | 0                | 0                |
| Seaport/airport              | 0                 | 0                | 0                |
| <b>Total Region</b>          | <b>22,124,005</b> | <b>7,406,913</b> | <b>9,871,430</b> |

Select zone traffic assignment procedures were performed on the zones within the Palmdale SOI to account for trips that were generated or attracted to Palmdale SOI only. All other trips were not counted as they were pass through trips. The daily average trip lengths for the Palmdale only trips to different locations are shown in Table 10. The daily link-based VMT, VHT and the average speeds by facility types are shown in Table 11 for the Palmdale only trips. The daily percent share of VMT for trips originating in the Palmdale SOI to all areas in the region, including Palmdale, is illustrated in Figure 7.

**Table 10: 2045 Base Average Trip Length for Palmdale Sphere of Influence Trips**

| From/To                 | Trip Length (II and IX*) (miles) | Percent Share of Trips |
|-------------------------|----------------------------------|------------------------|
| Palmdale sphere         | 4.43                             | 71.7%                  |
| Lancaster sphere        | 9.46                             | 15.4%                  |
| High Desert region      | 15.52                            | 2.5%                   |
| Imperial County         | 228.35                           | 0.0%                   |
| Los Angeles County      | 55.68                            | 6.8%                   |
| Orange County           | 108.62                           | 0.4%                   |
| Riverside County        | 110.91                           | 0.3%                   |
| San Bernardino County   | 68.66                            | 1.3%                   |
| Ventura County          | 75.65                            | 0.4%                   |
| Externals               | 68.69                            | 1.0%                   |
| Seaport/airport         | 38.89                            | 0.3%                   |
| <b>Weighted Average</b> | <b>11.56</b>                     | <b>100.0%</b>          |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.



**Table 11: 2045 Base Palmdale Sphere of Influence (II, IX and XI\*) Daily, VMT, VHT, Average Speed by Facility**

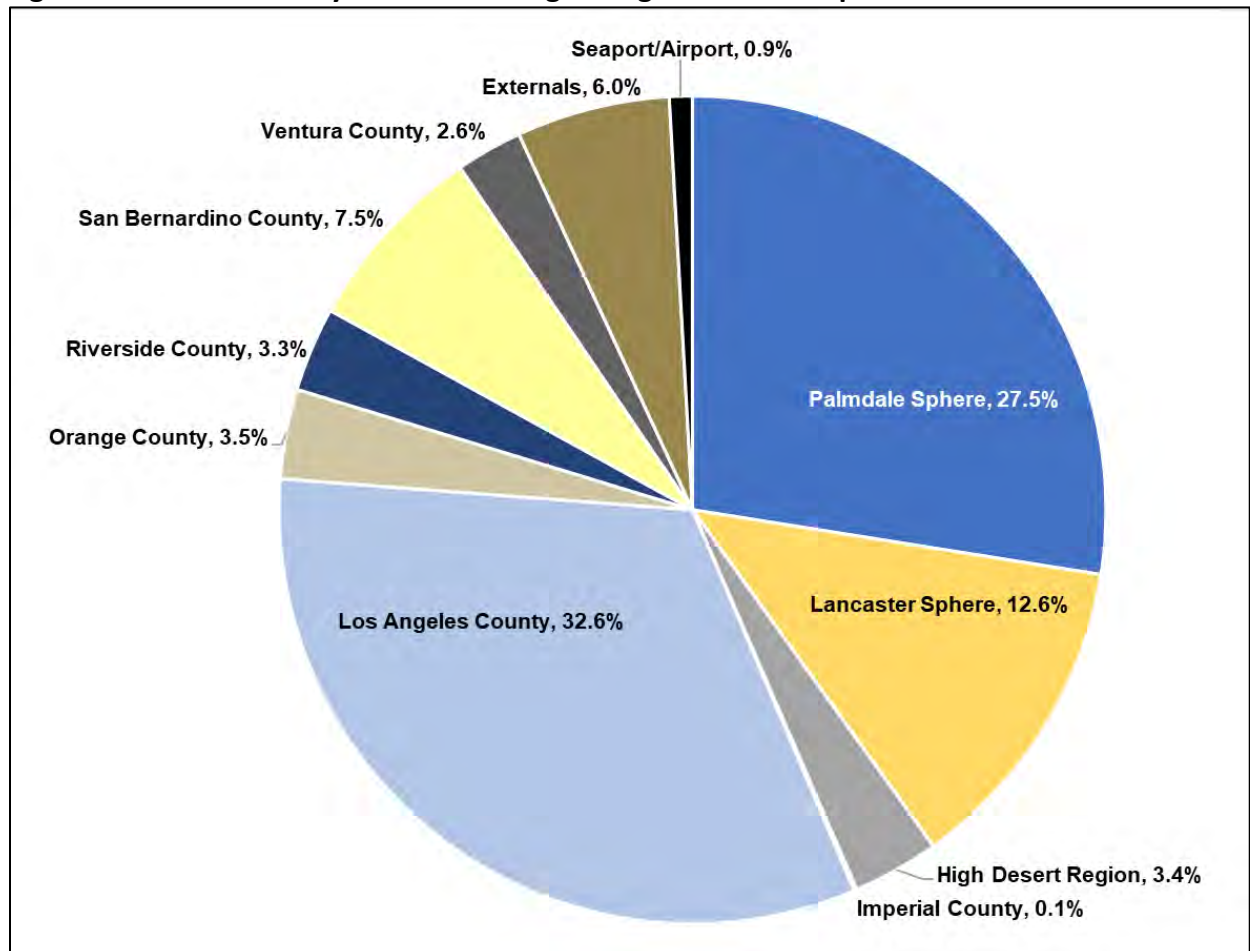
| Facility                          | VMT              | VHT            | Average Speed (mph) |
|-----------------------------------|------------------|----------------|---------------------|
| Freeways                          | 2,945,756        | 129,261        | 44.7                |
| HOT facilities                    | 9,285            | 271            | 63.3                |
| HOV facilities                    | 284,422          | 17,684         | 47.7                |
| Expressways/parkways              | 5,650            | 213            | 51.2                |
| Principal arterials               | 1,671,644        | 47,215         | 29.8                |
| Minor arterials                   | 1,897,218        | 58,807         | 30.3                |
| Major collectors                  | 1,321,027        | 39,778         | 23.6                |
| Minor connectors                  | 43,307           | 1,357          | 29.0                |
| Freeway ramps                     | 156,041          | 22,220         | 20.1                |
| Truck lanes only                  | 7,485            | 730            | 22.2                |
| Centroid connectors               | 520,432          | 20,729         | 24.4                |
| Total without centroid connectors | 8,341,835        | 317,535        | 35.2                |
| <b>Total of All Links</b>         | <b>8,862,268</b> | <b>338,264</b> | <b>34.2</b>         |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

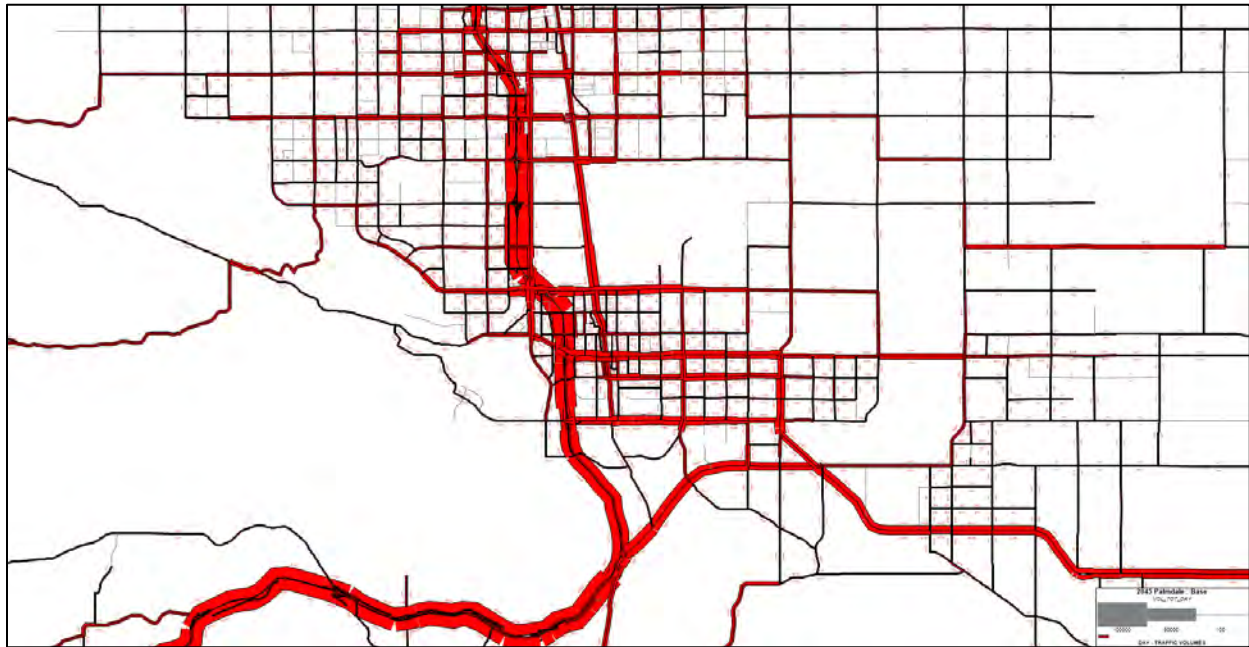
**Figure 7: 2045 Base Daily VMT Share Originating in Palmdale Sphere of Influence**



**Traffic Report**

Traffic assignments were performed to produce traffic volumes on the facilities inside and outside the Palmdale SOI. Traffic assignments are available for AM peak period, mid-day period, PM peak period, evening period, night period and daily. The daily traffic assignment volumes (bandwidths) are shown in Figure 8. The post-processed daily assignment volumes and the LOS at various segments are shown in the Table 12.

**Figure 8: 2045 Base Daily Traffic Volumes Forecast**



Traffic Report

**Table 12: 2045 Base Daily Volumes**

| LINKID | Roadway Segments          |                                  | Lanes | 2045 Base         |          |      |     |
|--------|---------------------------|----------------------------------|-------|-------------------|----------|------|-----|
|        | Roadway                   | From/To                          |       | 2045Base_Tot_Flow | Capacity | V/C  | LOS |
| 1001   | Columbia Way/Avenue M     | 10th Street W to Sierra Hwy      | 4     | 31,993            | 36,000   | 0.89 | D   |
| 1002   | Columbia Way/Avenue M     | Sierra Hwy to 10th Street E      | 4     | 33,414            | 36,000   | 0.93 | E   |
| 1003   | Columbia Way/Avenue M     | 10th Street E to 20th Street E   | 4     | 20,665            | 36,000   | 0.57 | A   |
| 1004   | Columbia Way/Avenue M     | 20th Street E to 30th Street E   | 4     | 15,610            | 36,000   | 0.43 | A   |
| 1005   | Columbia Way/Avenue M     | 30th Street E to 40th Street E   | 4     | 10,578            | 36,000   | 0.29 | A   |
| 1006   | Columbia Way/Avenue M     | 40th Street E to 50th Street     | 4     | 13,306            | 36,000   | 0.37 | A   |
| 1007   | Rancho Vista Ave/Avenue P | 50th Street W to Town Center Dr  | 4     | 20,985            | 36,000   | 0.58 | A   |
| 1008   | Rancho Vista Ave/Avenue P | Town Center Dr to 30th Street W  | 4     | 20,985            | 36,000   | 0.58 | A   |
| 1009   | Rancho Vista Ave/Avenue P | 30th Street W to 25th Street W   | 4     | 22,457            | 36,000   | 0.62 | B   |
| 1010   | Rancho Vista Ave/Avenue P | 25th Street W to 20th Street W   | 4     | 27,517            | 36,000   | 0.76 | C   |
| 1011   | Rancho Vista Ave/Avenue P | 20th Street W to 15th Street W   | 4     | 27,426            | 36,000   | 0.76 | C   |
| 1012   | Rancho Vista Ave/Avenue P | 15th Street to 10th Street W     | 6     | 42,819            | 54,000   | 0.79 | C   |
| 1013   | Rancho Vista Ave/Avenue P | 10th Street W to SR 14           | 6     | 37,114            | 54,000   | 0.69 | B   |
| 1014   | Rancho Vista Ave/Avenue P | SR 14 to Country Club Dr         | 4     | 23,823            | 54,000   | 0.44 | A   |
| 1015   | Rancho Vista Ave/Avenue P | Country Club Dr to Division St   | 4     | 28,050            | 45,000   | 0.62 | B   |
| 1016   | Rancho Vista Ave/Avenue P | Division St to Sierra Hwy        | 4     | 22,334            | 36,000   | 0.62 | B   |
| 1017   | East Avenue P             | Sierra Hwy to 8th Street E       | 4     | 41,328            | 36,000   | 1.15 | F   |
| 1018   | East Avenue P             | 8th Street E to 15th Street E    | 4     | 41,328            | 36,000   | 0.89 | D   |
| 1019   | East Avenue P             | 15th Street E to 20th Street E   | 4     | 33,406            | 36,000   | 0.93 | E   |
| 1020   | East Avenue P             | 20th Street E to 25th Street E   | 4     | 26,501            | 36,000   | 0.74 | C   |
| 1021   | East Avenue P             | 25th Street E to 30th Street E   | 4     | 20,757            | 36,000   | 0.58 | A   |
| 1022   | Avenue Q                  | Trade Center Dr to 5th Street W  | 4     | 4,700             | 36,000   | 0.13 | A   |
| 1023   | Avenue Q                  | Division Street to 6th Street E  | 2     | 8,517             | 18,000   | 0.47 | A   |
| 1024   | Avenue Q                  | Sierra Hwy to 10th Street E      | 2     | 12,262            | 18,000   | 0.68 | B   |
| 1025   | Avenue Q                  | 10th Street E to 20th Street E   | 2     | 8,323             | 18,000   | 0.46 | A   |
| 1026   | Avenue Q                  | 20th Street E to 30th Street E   | 2     | 7,375             | 18,000   | 0.41 | A   |
| 1027   | Avenue Q                  | 30th Street E to 40th Street E   | 2     | 8,100             | 18,000   | 0.45 | A   |
| 1028   | Elizabeth Lake Rd         | 25th Street W to 20th Street W   | 4     | 16,726            | 36,000   | 0.46 | A   |
| 1029   | Elizabeth Lake Rd         | 20th Street W to 15th Street W   | 4     | 17,906            | 36,000   | 0.50 | A   |
| 1030   | Elizabeth Lake Rd         | 15th Street W to 10th Street W   | 4     | 22,454            | 36,000   | 0.62 | B   |
| 1031   | Palmdale Blvd             | 10th Street W to Trade Center Dr | 4     | 24,318            | 54,000   | 0.45 | A   |

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**Table 12: 2045 Base Daily Volumes**

| LINKID | Roadway Segments         |                                   | Lanes | 2045 Base         |          |      |     |
|--------|--------------------------|-----------------------------------|-------|-------------------|----------|------|-----|
|        | Roadway                  | From/To                           |       | 2045Base_Tot_Flow | Capacity | V/C  | LOS |
| 1032   | Palmdale Blvd            | Trade Center Dr to 5th Street W   | 4     | 20,913            | 54,000   | 0.39 | A   |
| 1033   | Palmdale Blvd            | 5th Street W to State Route 14    | 4     | 30,395            | 54,000   | 0.56 | A   |
| 1034   | Palmdale Blvd            | Division Street to 5th St E       | 6     | 30,499            | 54,000   | 0.56 | A   |
| 1035   | Palmdale Blvd            | 5th Street E to 10th Street E     | 4     | 30,526            | 54,000   | 0.57 | A   |
| 1036   | Palmdale Blvd            | 10th Street E to 15th Street E    | 4     | 30,423            | 36,000   | 0.85 | D   |
| 1037   | Palmdale Blvd            | 15th Street E to 20th Street E    | 4     | 22,630            | 36,000   | 0.63 | B   |
| 1038   | Palmdale Blvd            | 20th Street E to 25th Street E    | 4     | 28,230            | 36,000   | 0.78 | C   |
| 1040   | Palmdale Blvd            | 40th Street E to 47th Street E    | 4     | 24,334            | 36,000   | 0.68 | B   |
| 1041   | Palmdale Blvd            | 50th Street E to 60th Street E    | 4     | 16,404            | 36,000   | 0.46 | A   |
| 1042   | Palmdale Blvd            | 70th Street E to 80th Street E    | 2     | 16,681            | 18,000   | 0.93 | E   |
| 1043   | E Avenue R               | Sierra Hwy to 10th Street E       | 4     | 20,559            | 36,000   | 0.57 | A   |
| 1044   | E Avenue R               | 10th Street E to 20th Street E    | 4     | 20,289            | 36,000   | 0.56 | A   |
| 1045   | E Avenue R               | 20th Street E to 30th Street E    | 4     | 23,421            | 36,000   | 0.65 | B   |
| 1046   | E Avenue R               | 30th Street E to 40th Street E    | 3     | 20,743            | 36,000   | 0.58 | A   |
| 1047   | E Avenue R               | 40th Street E to 47th Street E    | 4     | 21,629            | 36,000   | 0.60 | B   |
| 1048   | E Avenue R               | 47th Street E to 60th Street E    | 4     | 16,355            | 36,000   | 0.45 | A   |
| 1049   | E Avenue R               | 60th Street E to 70th Street E    | 4     | 7,563             | 36,000   | 0.21 | A   |
| 1050   | Avenue S                 | Tovey Avenue to Tierra Subida Ave | 4     | 9,505             | 36,000   | 0.26 | A   |
| 1051   | Avenue S                 | Tierra Subida Ave to SR 14        | 4     | 14,400            | 36,000   | 0.40 | A   |
| 1052   | Avenue S                 | SR 14 to 5th Street E             | 4     | 16,681            | 36,000   | 0.46 | A   |
| 1053   | Avenue S                 | 5th Street E to Sierra Hwy        | 4     | 29,095            | 36,000   | 0.81 | D   |
| 1054   | Avenue S                 | Sierra Hwy to 10th Street E       | 4     | 36,424            | 36,000   | 1.01 | F   |
| 1055   | Avenue S                 | 10th Street E to 20th Street E    | 4     | 33,024            | 36,000   | 0.92 | E   |
| 1056   | Avenue S                 | 20th Street E to 25th Street E    | 4     | 32,796            | 36,000   | 0.91 | E   |
| 1057   | Avenue S                 | 25th Street E to 30th Street E    | 4     | 29,920            | 36,000   | 0.83 | D   |
| 1058   | Avenue S                 | 30th Street E to 35th Street E    | 6     | 24,137            | 54,000   | 0.45 | A   |
| 1059   | Avenue S                 | 35th Street E to 40th Street E    | 6     | 23,612            | 54,000   | 0.44 | A   |
| 1060   | Avenue S                 | 40th Street E to 47th Street E    | 6     | 23,867            | 54,000   | 0.44 | A   |
| 1061   | Avenue S                 | 47th Street E to 55th Street E    | 4     | 23,819            | 36,000   | 0.66 | B   |
| 1062   | Pearblossom Hwy/Avenue T | Sierra Hwy to 25th Street E       | 4     | 56,434            | 36,000   | 1.57 | F   |
| 1063   | Pearblossom Hwy/Avenue T | 25th Street E to 40th Street E    | 4     | 47,628            | 36,000   | 1.32 | F   |

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**Table 12: 2045 Base Daily Volumes**

| LINKID | Roadway Segments                |                                    | Lanes | 2045 Base         |          |      |     |
|--------|---------------------------------|------------------------------------|-------|-------------------|----------|------|-----|
|        | Roadway                         | From/To                            |       | 2045Base_Tot_Flow | Capacity | V/C  | LOS |
| 1064   | Pearblossom Hwy/Avenue T        | 40th Street E to 47th Street E     | 4     | 33,627            | 36,000   | 0.93 | E   |
| 1065   | Pearblossom Hwy/Avenue T        | 47th Street E to Fort Tejon Road   | 4     | 33,627            | 36,000   | 0.93 | E   |
| 1066   | Pearblossom Hwy/Avenue T        | Fort Tejon Road to 70th Street E   | 4     | 33,627            | 36,000   | 0.93 | E   |
| 1067   | 10th Street W/Tierra Subida Ave | W Avenue M to W Avenue N           | 4     | 15,470            | 36,000   | 0.43 | A   |
| 1068   | 10th Street W/Tierra Subida Ave | W Avenue N to W Avenue O           | 4     | 21,544            | 36,000   | 0.60 | A   |
| 1069   | 10th Street W/Tierra Subida Ave | W Avenue O to SR 14                | 4     | 17,627            | 36,000   | 0.49 | A   |
| 1070   | 10th Street W/Tierra Subida Ave | SR 14 to Rancho Vista Blvd         | 6     | 36,947            | 54,000   | 0.68 | B   |
| 1071   | 10th Street W/Tierra Subida Ave | Rancho Vista Blvd to Technology Dr | 6     | 43,093            | 54,000   | 0.80 | C   |
| 1072   | 10th Street W/Tierra Subida Ave | Technology Dr to W Palmdale Blvd   | 5     | 46,068            | 45,000   | 1.02 | F   |
| 1073   | 10th Street W/Tierra Subida Ave | W Palmdale Blvd to Rayburn Rd      | 4     | 20,129            | 36,000   | 0.56 | A   |
| 1074   | Sierra Hwy                      | Columbia Way to E Avenue N         | 4     | 32,154            | 36,000   | 0.89 | D   |
| 1075   | Sierra Hwy                      | E Avenue N to E Avenue O           | 4     | 33,741            | 36,000   | 0.94 | E   |
| 1076   | Sierra Hwy                      | E Avenue O to E Avenue P           | 4     | 46,043            | 36,000   | 1.28 | F   |
| 1077   | Sierra Hwy                      | E Avenue P to E Avenue Q           | 4     | 15,375            | 36,000   | 0.43 | A   |
| 1078   | Sierra Hwy                      | E Avenue Q to Palmdale Blvd        | 4     | 15,176            | 36,000   | 0.42 | A   |
| 1079   | Sierra Hwy                      | Palmdale Blvd to E Avenue R        | 4     | 11,555            | 36,000   | 0.32 | A   |
| 1080   | Sierra Hwy                      | E Avenue R to E Avenue S           | 4     | 7,289             | 36,000   | 0.20 | A   |
| 1081   | Sierra Hwy                      | E Avenue S to Pearblossom Hwy      | 4     | 8,070             | 36,000   | 0.22 | A   |
| 1082   | 10th Street E                   | E Avenue P to E Avenue Q           | 2     | 2,357             | 18,000   | 0.13 | A   |
| 1083   | 10th Street E                   | E Avenue Q to E Palmdale Blvd      | 4     | 5,966             | 36,000   | 0.17 | A   |
| 1084   | 10th Street E                   | E. Palmdale Blvd to Avenue R       | 2     | 8,945             | 18,000   | 0.50 | A   |
| 1085   | 10th Street E                   | Avenue R to Avenue S1              | 2     | 5,055             | 18,000   | 0.28 | A   |
| 1086   | 20th Street E                   | E Avenue P to E Avenue Q           | 2     | 8,506             | 18,000   | 0.47 | A   |
| 1087   | 20th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 8,996             | 18,000   | 0.50 | A   |
| 1088   | 20th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 14,236            | 36,000   | 0.40 | A   |
| 1089   | 20th Street E                   | E Avenue R to E Avenue S           | 4     | 13,125            | 36,000   | 0.36 | A   |
| 1090   | 25th Street E                   | E Avenue P to E Avenue Q           | 2     | 8,458             | 18,000   | 0.47 | A   |
| 1091   | 25th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 8,663             | 18,000   | 0.48 | A   |
| 1092   | 25th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 15,584            | 36,000   | 0.43 | A   |
| 1093   | 25th Street E                   | E Avenue R to E Avenue S           | 4     | 19,259            | 36,000   | 0.53 | A   |
| 1094   | 25th Street E                   | E Avenue S to Pearblossom Hwy      | 4     | 17,793            | 36,000   | 0.49 | A   |

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**Table 12: 2045 Base Daily Volumes**

| LINKID                       | Roadway Segments                        |                                  | Lanes | 2045 Base         |          |      |            |
|------------------------------|---|----------------------------------|-------|-------------------|----------|------|------------|
|                              | Roadway                                 | From/To                          |       | 2045Base_Tot_Flow | Capacity | V/C  | LOS        |
| 1095                         | 30th Street E                           | E Avenue P to E Avenue Q         | 2     | 8,526             | 18,000   | 0.47 | A          |
| 1096                         | 30th Street E                           | E Avenue Q to Palmdale Blvd      | 2     | 8,295             | 18,000   | 0.46 | A          |
| 1097                         | 30th Street E                           | Palmdale Blvd to E Avenue R      | 4     | 8,891             | 36,000   | 0.25 | A          |
| 1098                         | 30th Street E                           | E Avenue R to E Avenue S         | 4     | 8,871             | 36,000   | 0.25 | A          |
| 1099                         | 40th Street E                           | E Avenue P to E Avenue Q         | 2     | 9,856             | 18,000   | 0.55 | A          |
| 1100                         | 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 2     | 7,185             | 18,000   | 0.40 | A          |
| 1101                         | 40th Street E                           | E Palmdale Blvd to E Avenue R    | 3     | 13,236            | 27,000   | 0.49 | A          |
| 1102                         | 40th Street E                           | E Avenue R to E Avenue S         | 3     | 13,439            | 27,000   | 0.50 | A          |
| 1103                         | 40th Street E                           | E Avenue S to Sierra Hwy         | 2     | 12,118            | 18,000   | 0.67 | B          |
| 1104                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 2     | 20,800            | 18,000   | 1.16 | F          |
| 1105                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 2     | 14,713            | 18,000   | 0.82 | D          |
| 1106                         | 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 4     | 28,780            | 36,000   | 0.80 | C          |
| 1107                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 4     | 32,805            | 36,000   | 0.91 | E          |
| 1108                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 4     | 25,499            | 36,000   | 0.71 | C          |
| 1109                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 5     | 29,940            | 45,000   | 0.67 | B          |
| 1110                         | 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearblossom Hwy      | 4     | 15,334            | 36,000   | 0.43 | A          |
| 1111                         | 47th Street E/50th Street E/Ft Tejon Rd | Pearblossom Hwy to E Avenue T-8  | 4     | 33,448            | 36,000   | 0.93 | E          |
| 1120                         | Technology Dr                           | 10th Street W to Trade Center Dr | 4     | 9,375             | 36,000   | 0.26 | A          |
| 1121                         | Technology Dr                           | 5th Street W to Division St      | 4     | 10,498            | 36,000   | 0.29 | A          |
| 1122                         | Technology Dr                           | Division St to Sierra Hwy        | 4     | 9,096             | 36,000   | 0.25 | A          |
| <b>Total LOS A Through D</b> |   |                                  |       |                   |          |      | <b>95</b>  |
| <b>Total LOS E</b>           |   |                                  |       |                   |          |      | <b>11</b>  |
| <b>Total LOS F</b>           |   |                                  |       |                   |          |      | <b>7</b>   |
| <b>Total LOS Reported</b>    |   |                                  |       |                   |          |      | <b>113</b> |

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The Table 13 reports the link-based VMT, VHT, VHD, and average speeds by facility for the Palmdale SOI for all trips regardless of trip origin or destination.

**Table 13: 2045 Base Palmdale Sphere of Influence VMT/VHT by Facility Type for All Trips**

| Facility               | AM Peak          |               |             |              | PM Peak          |               |             |              | Daily            |                |             |               |
|------------------------|------------------|---------------|-------------|--------------|------------------|---------------|-------------|--------------|------------------|----------------|-------------|---------------|
|                        | VMT              | VHT           | Speed       | Delay        | VMT              | VHT           | Speed       | Delay        | VMT              | VHT            | Speed       | Delay         |
| Freeways               | 270,601          | 5,517         | 49.1        | 1,651        | 305,078          | 5,068         | 60.2        | 710          | 1,181,686        | 19,501         | 60.6        | 2,620         |
| HOT facilities         | 0                | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0             |
| HOV facilities         | 69,103           | 1,239         | 55.8        | 252          | 68,108           | 1,040         | 65.5        | 67           | 145,399          | 2,395          | 60.7        | 318           |
| Expressways/parkways   | 0                | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0             |
| Principal arterials    | 226,065          | 6,363         | 35.5        | 1,382        | 338,346          | 9,459         | 35.8        | 1,972        | 1,257,146        | 32,740         | 38.4        | 5,022         |
| Minor arterials        | 262,555          | 6,673         | 39.3        | 658          | 419,648          | 10,697        | 39.2        | 1,065        | 1,401,721        | 34,643         | 40.5        | 2,427         |
| Major collectors       | 123,229          | 3,449         | 35.7        | 489          | 180,141          | 4,873         | 37.0        | 519          | 568,232          | 14,924         | 38.1        | 1,182         |
| Minor collectors       | 2,741            | 73            | 37.7        | 2            | 3,415            | 113           | 30.2        | 19           | 11,491           | 349            | 32.9        | 32            |
| Freeway ramps          | 11,492           | 582           | 19.8        | 232          | 17,115           | 871           | 19.6        | 363          | 61,651           | 2,836          | 21.7        | 990           |
| Truck lanes only       | 0                | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0             |
| Centroid connectors    | 73,459           | 2,881         | 25.5        | 0            | 121,957          | 4,786         | 25.5        | 0            | 402,448          | 15,803         | 25.5        | 0             |
| <b>Total—All Links</b> | <b>1,039,246</b> | <b>26,775</b> | <b>38.8</b> | <b>4,666</b> | <b>1,453,807</b> | <b>36,907</b> | <b>39.4</b> | <b>4,714</b> | <b>5,029,773</b> | <b>123,190</b> | <b>40.8</b> | <b>12,590</b> |

**Summary**

Daily trips are defined as having an origin, destination or both within the Palmdale SOI and do not include pass-through trips. The Palmdale trips generate a VMT of 8,862,268 and a VHT of 338,264 on all the roadway way facilities within the SCAG region. The Palmdale SOI only accounts for 27.5 percent of the total VMT generated, Lancaster accounts for 12.6 percent, High Desert region accounts for 3.4 percent, while the rest of Los Angeles County accounts for 32.6 percent.

The average trip length for trips originating and staying within the Palmdale SOI is 4.43 miles and this constitutes 71.7 percent of all the Palmdale trips. The average trip length for trips originating in Palmdale SOI and having a destination anywhere in the SCAG region including itself is 11.56 miles.

Daily segment-based LOS results show the number of segments operating at LOS E is eleven and LOS F is seven and accounts for 9.7 percent and 6.2 percent, respectively, of all the segments analyzed.

The Palmdale transportation network as a system, which includes all roadway facilities within the Palmdale SOI, generates 5,029,773 VMT, 123,190 VHT and 12,590 VHD daily. This accounts for all trips, including pass through trips, using the highway network within the Palmdale SOI.



## 2045 BASE WITH HIGH DESERT CORRIDOR FREEWAY

The 2045 base with High Desert Corridor freeway used the 2045 Base year dataset and the network assumptions are consistent with the RTP except for the HDC facility. The 2045 socio-economic data for the Palmdale SOI was updated with inputs from the City of Palmdale. The socio-economic data outside the Palmdale SOI is consistent with the SCAG assumptions for the region for the year 2040. The High Desert Corridor Freeway was coded from SR 14 to SR 138. The 2045 Base scenario trip tables were used to perform traffic assignments only. Table 14 reports the land use assumptions for the region. This scenario was performed to illustrate the effects of the HDC on the Palmdale street system as the HDC would be major east–west freeway connecting Palmdale and Victorville. The HDC may not be built before 2050 or beyond as no funding sources are identified.

Select zone traffic assignment procedures were performed on the zones within the Palmdale SOI to account for trips that were generated or attracted to Palmdale SOI only. All other trips were not counted as they were pass through trips.

**Table 14: 2045 Base with High Desert Corridor Freeway Socio-Economic Forecast**

|                              | Population        | Households       | Employment       |
|------------------------------|-------------------|------------------|------------------|
| Palmdale sphere              | 240,515           | 72,840           | 67,085           |
| Lancaster Sphere             | 218,843           | 69,963           | 59,678           |
| High Desert region           | 40,845            | 14,409           | 5,030            |
| Ventura County               | 282,025           | 92,482           | 101,050          |
| Los Angeles County remainder | 11,001,144        | 3,783,739        | 5,117,195        |
| Orange County                | 3,460,381         | 1,152,340        | 1,898,952        |
| Riverside County             | 3,183,378         | 1,054,557        | 1,174,500        |
| San Bernardino County        | 2,731,308         | 854,360          | 1,028,132        |
| Imperial County              | 965,566           | 312,223          | 419,808          |
| Externals                    | 0                 | 0                | 0                |
| Seaport/airport              | 0                 | 0                | 0                |
| <b>Total Region</b>          | <b>22,124,005</b> | <b>7,406,913</b> | <b>9,871,430</b> |



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The daily average trip lengths for the Palmdale only trips to different locations are reported in Table 15.

**Table 15: 2045 Base with High Desert Corridor Average Trip Length for Palmdale SOI Trips**

| From/To                 | Trip Length (II and IX*) (miles) | Percent Share of Trips |
|-------------------------|----------------------------------|------------------------|
| Palmdale sphere         | 4.46                             | 71.9%                  |
| Lancaster sphere        | 9.53                             | 15.3%                  |
| High Desert region      | 15.49                            | 2.5%                   |
| Imperial County         | 227.28                           | 0.0%                   |
| Los Angeles County      | 55.83                            | 6.6%                   |
| Orange County           | 108.82                           | 0.4%                   |
| Riverside County        | 110.51                           | 0.3%                   |
| San Bernardino County   | 69.10                            | 1.3%                   |
| Ventura County          | 75.73                            | 0.4%                   |
| Externals               | 68.89                            | 1.0%                   |
| Seaport/airport         | 39.03                            | 0.3%                   |
| <b>Weighted Average</b> | <b>11.62</b>                     | <b>100.0%</b>          |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.

The daily link-based VMT, VHT and the average speeds by facility types are reported in Table 16 for Palmdale only trips.

**Table 16: 2045 Base with High Desert Corridor Palmdale Sphere of Influence (II, IX and XI\*) Daily, VMT, VHT, Average Speed by Facility**

| Facility                          | VMT              | VHT            | Average Speed (mph) |
|-----------------------------------|------------------|----------------|---------------------|
| Freeways                          | 3,068,071        | 131,896        | 44.8                |
| HOT facilities                    | 10,024           | 292            | 63.2                |
| HOV facilities                    | 282,077          | 17,774         | 47.7                |
| Expressways/parkways              | 192,155          | 3,645          | 51.7                |
| Principal arterials               | 1,579,551        | 44,131         | 29.8                |
| Minor arterials                   | 1,696,186        | 53,626         | 30.2                |
| Major collectors                  | 1,301,285        | 39,251         | 23.6                |
| Minor connectors                  | 48,311           | 1,537          | 29.0                |
| Freeway ramps                     | 166,282          | 22,421         | 20.2                |
| Truck lanes only                  | 7,516            | 710            | 23.0                |
| Centroid connectors               | 517,058          | 20,595         | 24.4                |
| Total without centroid connectors | 8,351,459        | 315,282        | 35.2                |
| <b>Total of All Links</b>         | <b>8,868,517</b> | <b>335,877</b> | <b>34.2</b>         |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

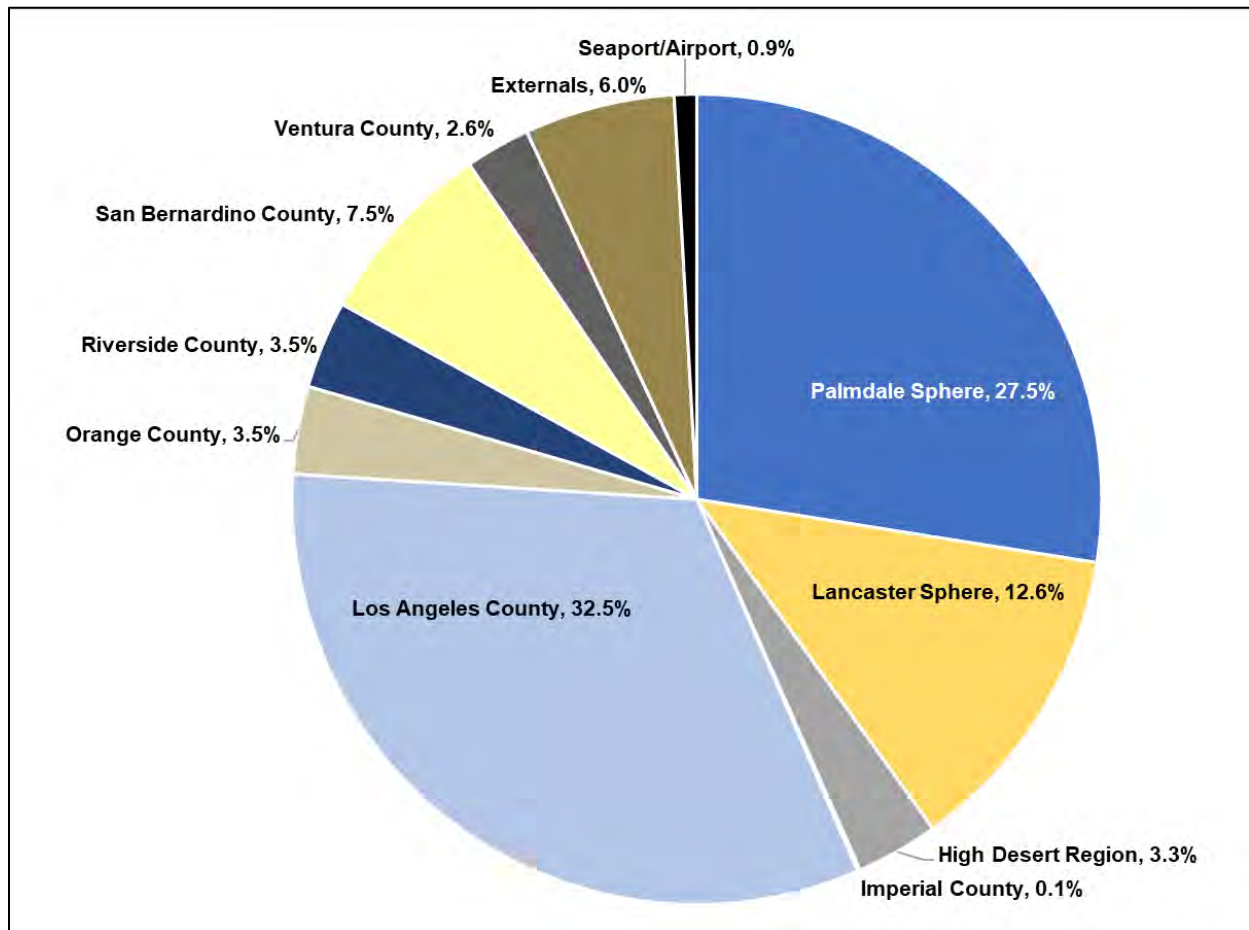
IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

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The daily percent share of the VMT for trips originating in the Palmdale SOI to all areas in the region, including Palmdale, is illustrated in Figure 9.

**Figure 9: 2045 Base with High Desert Corridor Daily VMT Share Originating in the Palmdale Sphere of Influence**



Traffic assignments are performed to produce traffic volumes on the various facilities, both within and outside the Palmdale SOI. Traffic assignments are available for AM peak period, mid-day period, PM peak period, evening period, night period and daily. The daily traffic assignment volumes (bandwidths) are shown in Figure 10. Figure 11 displays the difference in daily volumes with and without the High Desert Corridor Freeway, where green bandwidths display the volumes that the new facility is carrying, and red bandwidths display the decrease in volumes on all other facilities, thereby improving LOS conditions on these facilities.

Figure 10: 2045 Base with High Desert Corridor Daily Traffic Volumes Forecast

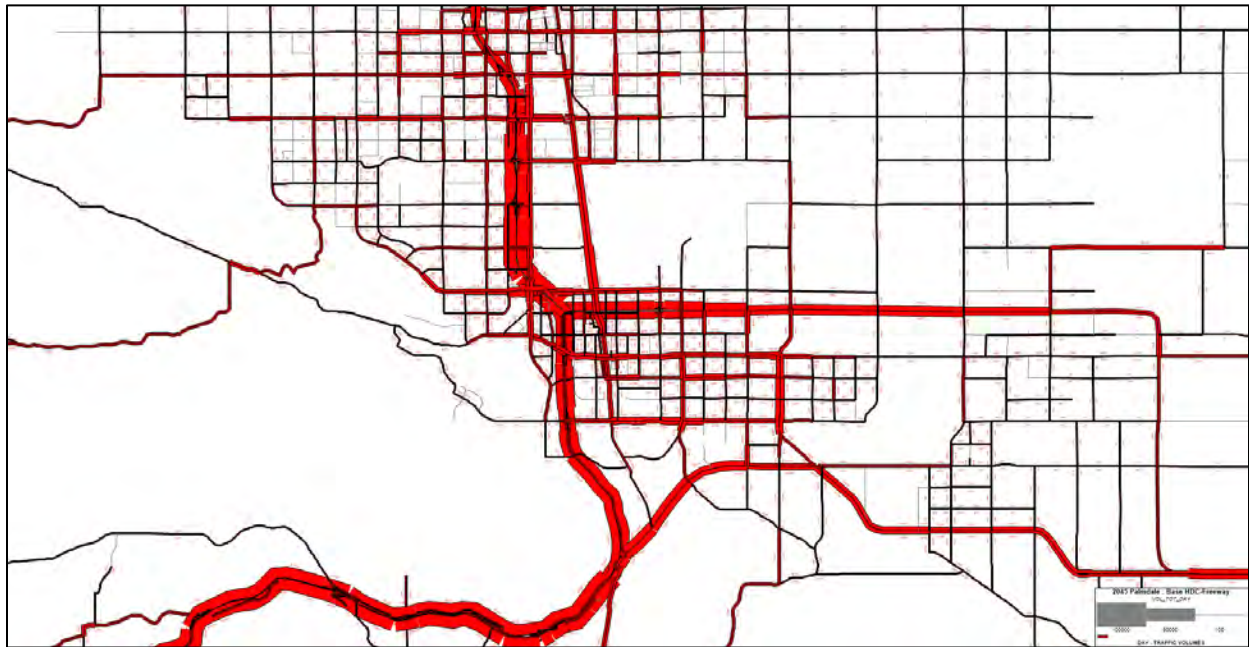
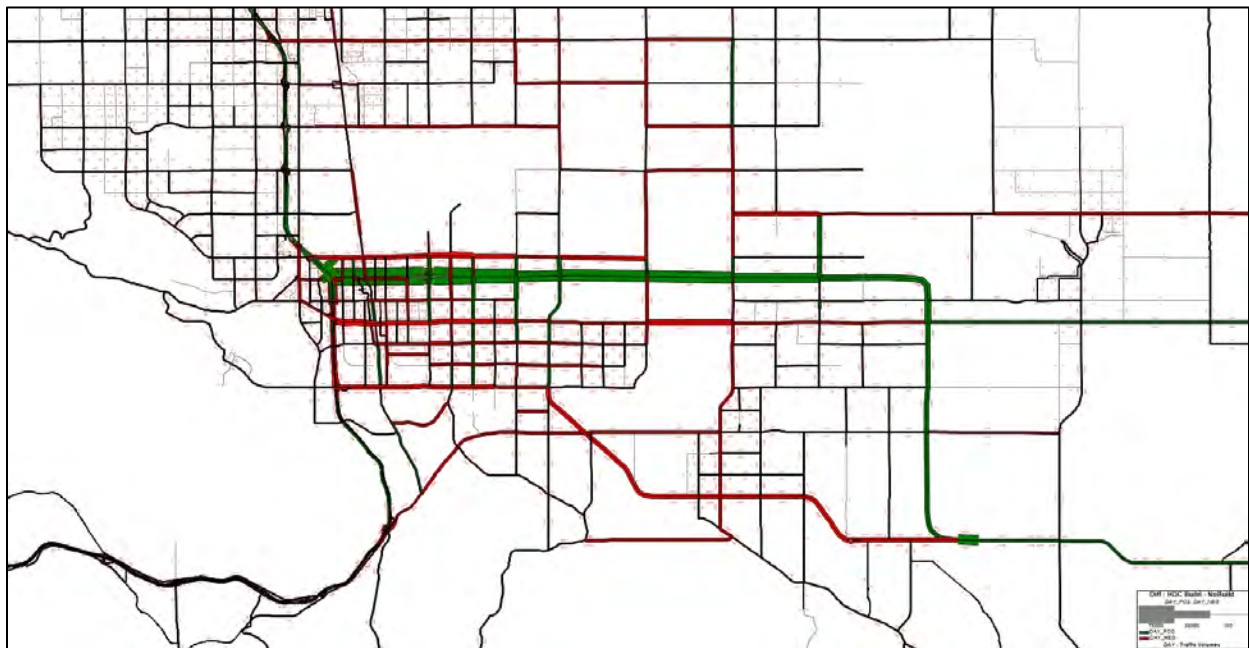


Figure 11: Comparison of 2045 Base to 2045 Base with High Desert Corridor Daily Traffic Volumes Forecasts



The post-processed daily assignment volumes and the LOS at various segments are reported in Table 17.

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**Table 17: 2045 Base with High Desert Corridor Daily Volumes**

| LINKID | Roadway Segments          |                                  | Lanes | 2045 Base with High Desert Corridor |          |      |     |
|--------|---------------------------|----------------------------------|-------|-------------------------------------|----------|------|-----|
|        | Roadway                   | From/To                          |       | 2045HDC_Tot_Flow_adj                | Capacity | V/C  | LOS |
| 1001   | Columbia Way/Avenue M     | 10th Street W to Sierra Hwy      | 4     | 30,032                              | 36,000   | 0.83 | D   |
| 1002   | Columbia Way/Avenue M     | Sierra Hwy to 10th Street E      | 4     | 30,598                              | 36,000   | 0.85 | D   |
| 1003   | Columbia Way/Avenue M     | 10th Street E to 20th Street E   | 4     | 17,513                              | 36,000   | 0.49 | A   |
| 1004   | Columbia Way/Avenue M     | 20th Street E to 30th Street E   | 4     | 13,382                              | 36,000   | 0.37 | A   |
| 1005   | Columbia Way/Avenue M     | 30th Street E to 40th Street E   | 4     | 7,475                               | 36,000   | 0.21 | A   |
| 1006   | Columbia Way/Avenue M     | 40th Street E to 50th Street     | 4     | 10,559                              | 36,000   | 0.29 | A   |
| 1007   | Rancho Vista Ave/Avenue P | 50th Street W to Town Center Dr  | 4     | 20,985                              | 36,000   | 0.58 | A   |
| 1008   | Rancho Vista Ave/Avenue P | Town Center Dr to 30th Street W  | 4     | 20,985                              | 36,000   | 0.58 | A   |
| 1009   | Rancho Vista Ave/Avenue P | 30th Street W to 25th Street W   | 4     | 22,457                              | 36,000   | 0.62 | B   |
| 1010   | Rancho Vista Ave/Avenue P | 25th Street W to 20th Street W   | 4     | 27,509                              | 36,000   | 0.76 | C   |
| 1011   | Rancho Vista Ave/Avenue P | 20th Street W to 15th Street W   | 4     | 27,134                              | 36,000   | 0.75 | C   |
| 1012   | Rancho Vista Ave/Avenue P | 15th Street to 10th Street W     | 6     | 43,279                              | 54,000   | 0.80 | D   |
| 1013   | Rancho Vista Ave/Avenue P | 10th Street W to SR 14           | 6     | 38,223                              | 54,000   | 0.71 | C   |
| 1014   | Rancho Vista Ave/Avenue P | SR 14 to Country Club Dr         | 4     | 23,332                              | 54,000   | 0.43 | A   |
| 1015   | Rancho Vista Ave/Avenue P | Country Club Dr to Division St   | 4     | 26,481                              | 54,000   | 0.49 | A   |
| 1016   | Rancho Vista Ave/Avenue P | Division St to Sierra Hwy        | 4     | 22,334                              | 45,000   | 0.59 | A   |
| 1017   | East Avenue P             | Sierra Hwy to 8th Street E       | 4     | 33,683                              | 36,000   | 0.62 | B   |
| 1018   | East Avenue P             | 8th Street E to 15th Street E    | 4     | 33,683                              | 36,000   | 0.94 | E   |
| 1019   | East Avenue P             | 15th Street E to 20th Street E   | 4     | 24,973                              | 36,000   | 0.68 | B   |
| 1020   | East Avenue P             | 20th Street E to 25th Street E   | 4     | 18,699                              | 36,000   | 0.69 | B   |
| 1021   | East Avenue P             | 25th Street E to 30th Street E   | 4     | 14,695                              | 36,000   | 0.52 | A   |
| 1022   | Avenue Q                  | Trade Center Dr to 5th Street W  | 4     | 4,549                               | 36,000   | 0.41 | A   |
| 1023   | Avenue Q                  | Division Street to 6th Street E  | 2     | 6,977                               | 36,000   | 0.13 | A   |
| 1024   | Avenue Q                  | Sierra Hwy to 10th Street E      | 2     | 9,447                               | 18,000   | 0.39 | A   |
| 1025   | Avenue Q                  | 10th Street E to 20th Street E   | 2     | 8,323                               | 18,000   | 0.52 | A   |
| 1026   | Avenue Q                  | 20th Street E to 30th Street E   | 2     | 7,106                               | 18,000   | 0.46 | A   |
| 1027   | Avenue Q                  | 30th Street E to 40th Street E   | 2     | 7,085                               | 18,000   | 0.39 | A   |
| 1028   | Elizabeth Lake Rd         | 25th Street W to 20th Street W   | 4     | 17,153                              | 36,000   | 0.48 | A   |
| 1029   | Elizabeth Lake Rd         | 20th Street W to 15th Street W   | 4     | 17,781                              | 36,000   | 0.49 | A   |
| 1030   | Elizabeth Lake Rd         | 15th Street W to 10th Street W   | 4     | 22,627                              | 36,000   | 0.63 | B   |
| 1031   | Palmdale Blvd             | 10th Street W to Trade Center Dr | 4     | 22,061                              | 54,000   | 0.41 | A   |
| 1032   | Palmdale Blvd             | Trade Center Dr to 5th Street W  | 4     | 18,772                              | 54,000   | 0.35 | A   |
| 1033   | Palmdale Blvd             | 5th Street W to State Route 14   | 4     | 29,963                              | 54,000   | 0.55 | A   |
| 1034   | Palmdale Blvd             | Division Street to 5th St E      | 6     | 25,175                              | 54,000   | 0.47 | A   |

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**Table 17: 2045 Base with High Desert Corridor Daily Volumes**

| LINKID | Roadway Segments                |                                   | Lanes | 2045 Base with High Desert Corridor |          |      |     |
|--------|---------------------------------|-----------------------------------|-------|-------------------------------------|----------|------|-----|
|        | Roadway                         | From/To                           |       | 2045HDC_Tot_Flow_adj                | Capacity | V/C  | LOS |
| 1035   | Palmdale Blvd                   | 5th Street E to 10th Street E     | 4     | 25,257                              | 54,000   | 0.47 | A   |
| 1036   | Palmdale Blvd                   | 10th Street E to 15th Street E    | 4     | 25,869                              | 36,000   | 0.72 | C   |
| 1037   | Palmdale Blvd                   | 15th Street E to 20th Street E    | 4     | 19,233                              | 36,000   | 0.53 | A   |
| 1038   | Palmdale Blvd                   | 20th Street E to 25th Street E    | 4     | 23,470                              | 36,000   | 0.65 | B   |
| 1040   | Palmdale Blvd                   | 40th Street E to 47th Street E    | 4     | 20,780                              | 36,000   | 0.58 | A   |
| 1041   | Palmdale Blvd                   | 50th Street E to 60th Street E    | 4     | 14,147                              | 36,000   | 0.39 | A   |
| 1042   | Palmdale Blvd                   | 70th Street E to 80th Street E    | 2     | 16,681                              | 18,000   | 0.93 | E   |
| 1043   | E Avenue R                      | Sierra Hwy to 10th Street E       | 4     | 19,490                              | 36,000   | 0.54 | A   |
| 1044   | E Avenue R                      | 10th Street E to 20th Street E    | 4     | 18,495                              | 36,000   | 0.51 | A   |
| 1045   | E Avenue R                      | 20th Street E to 30th Street E    | 4     | 18,408                              | 36,000   | 0.51 | A   |
| 1046   | E Avenue R                      | 30th Street E to 40th Street E    | 3     | 14,851                              | 36,000   | 0.41 | A   |
| 1047   | E Avenue R                      | 40th Street E to 47th Street E    | 4     | 17,922                              | 36,000   | 0.50 | A   |
| 1048   | E Avenue R                      | 47th Street E to 60th Street E    | 4     | 15,158                              | 36,000   | 0.42 | A   |
| 1049   | E Avenue R                      | 60th Street E to 70th Street E    | 4     | 6,317                               | 36,000   | 0.18 | A   |
| 1050   | Avenue S                        | Tovey Avenue to Tierra Subida Ave | 4     | 9,346                               | 36,000   | 0.26 | A   |
| 1051   | Avenue S                        | Tierra Subida Ave to SR 14        | 4     | 14,798                              | 36,000   | 0.41 | A   |
| 1052   | Avenue S                        | SR 14 to 5th Street E             | 4     | 13,190                              | 36,000   | 0.37 | A   |
| 1053   | Avenue S                        | 5th Street E to Sierra Hwy        | 4     | 25,828                              | 36,000   | 0.72 | C   |
| 1054   | Avenue S                        | Sierra Hwy to 10th Street E       | 4     | 32,170                              | 36,000   | 0.89 | D   |
| 1055   | Avenue S                        | 10th Street E to 20th Street E    | 4     | 29,830                              | 36,000   | 0.83 | D   |
| 1056   | Avenue S                        | 20th Street E to 25th Street E    | 4     | 30,323                              | 36,000   | 0.84 | D   |
| 1057   | Avenue S                        | 25th Street E to 30th Street E    | 4     | 29,058                              | 36,000   | 0.81 | D   |
| 1058   | Avenue S                        | 30th Street E to 35th Street E    | 6     | 24,137                              | 54,000   | 0.45 | A   |
| 1059   | Avenue S                        | 35th Street E to 40th Street E    | 6     | 23,612                              | 54,000   | 0.44 | A   |
| 1060   | Avenue S                        | 40th Street E to 47th Street E    | 6     | 23,867                              | 54,000   | 0.44 | A   |
| 1061   | Avenue S                        | 47th Street E to 55th Street E    | 4     | 23,500                              | 36,000   | 0.65 | B   |
| 1062   | Pearblossom Hwy/Avenue T        | Sierra Hwy to 25th Street E       | 4     | 53,902                              | 36,000   | 1.50 | F   |
| 1063   | Pearblossom Hwy/Avenue T        | 25th Street E to 40th Street E    | 4     | 44,895                              | 36,000   | 1.25 | F   |
| 1064   | Pearblossom Hwy/Avenue T        | 40th Street E to 47th Street E    | 4     | 30,912                              | 36,000   | 0.86 | D   |
| 1065   | Pearblossom Hwy/Avenue T        | 47th Street E to Fort Tejon Road  | 4     | 30,912                              | 36,000   | 0.86 | D   |
| 1066   | Pearblossom Hwy/Avenue T        | Fort Tejon Road to 70th Street E  | 4     | 30,912                              | 36,000   | 0.86 | D   |
| 1067   | 10th Street W/Tierra Subida Ave | W Avenue M to W Avenue N          | 4     | 15,186                              | 36,000   | 0.42 | A   |
| 1068   | 10th Street W/Tierra Subida Ave | W Avenue N to W Avenue O          | 4     | 21,170                              | 36,000   | 0.59 | A   |
| 1069   | 10th Street W/Tierra Subida Ave | W Avenue O to SR 14               | 4     | 17,627                              | 36,000   | 0.49 | A   |



Traffic Report

**Table 17: 2045 Base with High Desert Corridor Daily Volumes**

| LINKID | Roadway Segments                |                                    | Lanes | 2045 Base with High Desert Corridor |          |      |     |
|--------|---------------------------------|------------------------------------|-------|-------------------------------------|----------|------|-----|
|        | Roadway                         | From/To                            |       | 2045HDC_Tot_Flow_adj                | Capacity | V/C  | LOS |
| 1070   | 10th Street W/Tierra Subida Ave | SR 14 to Rancho Vista Blvd         | 6     | 35,324                              | 54,000   | 0.65 | B   |
| 1071   | 10th Street W/Tierra Subida Ave | Rancho Vista Blvd to Technology Dr | 6     | 38,620                              | 54,000   | 0.72 | C   |
| 1072   | 10th Street W/Tierra Subida Ave | Technology Dr to W Palmdale Blvd   | 5     | 43,093                              | 45,000   | 0.96 | E   |
| 1073   | 10th Street W/Tierra Subida Ave | W Palmdale Blvd to Rayburn Rd      | 4     | 19,634                              | 36,000   | 0.55 | A   |
| 1074   | Sierra Hwy                      | Columbia Way to E Avenue N         | 4     | 30,922                              | 36,000   | 0.86 | D   |
| 1075   | Sierra Hwy                      | E Avenue N to E Avenue O           | 4     | 32,221                              | 36,000   | 0.90 | D   |
| 1076   | Sierra Hwy                      | E Avenue O to E Avenue P           | 4     | 44,357                              | 36,000   | 1.23 | F   |
| 1077   | Sierra Hwy                      | E Avenue P to E Avenue Q           | 4     | 14,366                              | 36,000   | 0.40 | A   |
| 1078   | Sierra Hwy                      | E Avenue Q to Palmdale Blvd        | 4     | 16,842                              | 36,000   | 0.47 | A   |
| 1079   | Sierra Hwy                      | Palmdale Blvd to E Avenue R        | 4     | 10,222                              | 36,000   | 0.28 | A   |
| 1080   | Sierra Hwy                      | E Avenue R to E Avenue S           | 4     | 9,588                               | 36,000   | 0.27 | A   |
| 1081   | Sierra Hwy                      | E Avenue S to Pearblossom Hwy      | 4     | 8,070                               | 36,000   | 0.22 | A   |
| 1082   | 10th Street E                   | E Avenue P to E Avenue Q           | 2     | 2,357                               | 18,000   | 0.13 | A   |
| 1083   | 10th Street E                   | E Avenue Q to E Palmdale Blvd      | 4     | 5,732                               | 36,000   | 0.16 | A   |
| 1084   | 10th Street E                   | E. Palmdale Blvd to Avenue R       | 2     | 7,914                               | 18,000   | 0.44 | A   |
| 1085   | 10th Street E                   | Avenue R to Avenue S1              | 2     | 3,898                               | 18,000   | 0.22 | A   |
| 1086   | 20th Street E                   | E Avenue P to E Avenue Q           | 2     | 12,843                              | 18,000   | 0.71 | C   |
| 1087   | 20th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 11,632                              | 18,000   | 0.65 | B   |
| 1088   | 20th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 15,425                              | 36,000   | 0.43 | A   |
| 1089   | 20th Street E                   | E Avenue R to E Avenue S           | 4     | 13,258                              | 36,000   | 0.37 | A   |
| 1090   | 25th Street E                   | E Avenue P to E Avenue Q           | 2     | 6,632                               | 18,000   | 0.37 | A   |
| 1091   | 25th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 7,356                               | 18,000   | 0.41 | A   |
| 1092   | 25th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 13,824                              | 36,000   | 0.38 | A   |
| 1093   | 25th Street E                   | E Avenue R to E Avenue S           | 4     | 20,571                              | 36,000   | 0.57 | A   |
| 1094   | 25th Street E                   | E Avenue S to Pearblossom Hwy      | 4     | 18,408                              | 36,000   | 0.51 | A   |
| 1095   | 30th Street E                   | E Avenue P to E Avenue Q           | 2     | 16,388                              | 18,000   | 0.91 | E   |
| 1096   | 30th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 12,702                              | 18,000   | 0.71 | C   |
| 1097   | 30th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 11,480                              | 36,000   | 0.32 | A   |
| 1098   | 30th Street E                   | E Avenue R to E Avenue S           | 4     | 10,654                              | 36,000   | 0.30 | A   |
| 1099   | 40th Street E                   | E Avenue P to E Avenue Q           | 2     | 19,798                              | 18,000   | 1.10 | F   |
| 1100   | 40th Street E                   | E Avenue Q to E Palmdale Blvd      | 2     | 10,909                              | 18,000   | 0.61 | B   |
| 1101   | 40th Street E                   | E Palmdale Blvd to E Avenue R      | 3     | 15,073                              | 27,000   | 0.56 | A   |
| 1102   | 40th Street E                   | E Avenue R to E Avenue S           | 3     | 11,906                              | 27,000   | 0.44 | A   |
| 1103   | 40th Street E                   | E Avenue S to Sierra Hwy           | 2     | 12,162                              | 18,000   | 0.68 | B   |

Traffic Report

**Table 17: 2045 Base with High Desert Corridor Daily Volumes**

| LINKID                       | Roadway Segments                         |                                  | Lanes | 2045 Base with High Desert Corridor |          |      |            |
|------------------------------|--|----------------------------------|-------|-------------------------------------|----------|------|------------|
|                              | Roadway                                  | From/To                          |       | 2045HDC_Tot_Flow_adj                | Capacity | V/C  | LOS        |
| 1104                         | 47th Street E/50th Street E/Ft Tejon Rd  | E Avenue M to E Avenue N         | 2     | 19,600                              | 18,000   | 1.09 | F          |
| 1105                         | 47th Street E/50th Street E/Ft Tejon Rd  | E Avenue P to Palmdale Blvd      | 2     | 17,449                              | 18,000   | 0.97 | E          |
| 1106                         | 47th Street E/50th Street E/Ft Tejon Rd  | Palmdale Blvd to E Avenue R      | 4     | 31,244                              | 36,000   | 0.87 | D          |
| 1107                         | 47th Street E/50th Street E/Ft Tejon Rd  | E Avenue R to E Avenue R-8       | 4     | 34,153                              | 36,000   | 0.95 | E          |
| 1108                         | 47th Street E/50th Street E/Ft Tejon Rd  | E Avenue R-8 to E Avenue S       | 4     | 29,287                              | 36,000   | 0.81 | D          |
| 1109                         | 47th Street E/50th Street E/Ft Tejon Rd  | E Avenue S to Essex Dr           | 5     | 24,514                              | 45,000   | 0.54 | A          |
| 1110                         | 47th Street E/50th Street E/Ft Tejon Rd  | Essex Dr to Pearblossom Hwy      | 4     | 15,334                              | 36,000   | 0.43 | A          |
| 1111                         | 47th Street E/50th Street E/Ft Tejon Rd  | Pearblossom Hwy to E Avenue T-8  | 4     | 24,541                              | 36,000   | 0.68 | B          |
| 1120                         | Technology Dr                            | 10th Street W to Trade Center Dr | 4     | 7,974                               | 36,000   | 0.22 | A          |
| 1121                         | Technology Dr                            | 5th Street W to Division St      | 4     | 7,958                               | 36,000   | 0.22 | A          |
| 1122                         | Technology Dr                            | Division St to Sierra Hwy        | 4     | 7,805                               | 36,000   | 0.22 | A          |
| 2011                         | HDC Freeway - SR14 to 20th Street        | SR14 to 20th Street              | 8     | 30,187                              | 72,000   | 0.42 | A          |
| 2012                         | HDC Freeway - SR14 to 20th Street        | SR14 to 20th Street              | 8     | 34,756                              | 72,000   | 0.48 | A          |
| 2021                         | HDC Freeway - 20th Street to 30th Street | 20th Street to 30th Street       | 8     | 29,318                              | 72,000   | 0.41 | A          |
| 2022                         | HDC Freeway - 20th Street to 30th Street | 20th Street to 30th Street       | 8     | 37,066                              | 72,000   | 0.51 | A          |
| 2030                         | HDC Expressway                           | 30th Street to 40th Street       | 4     | 53,779                              | 60,000   | 0.90 | D          |
| 2031                         | HDC Expressway                           | 40th Street to 40th Street       | 4     | 39,413                              | 60,000   | 0.66 | B          |
| 2032                         | HDC Expressway                           | 50th Street to 70th Street       | 4     | 41,244                              | 60,000   | 0.69 | B          |
| 2033                         | HDC Expressway                           | 70th Street to 90th Street       | 4     | 41,070                              | 60,000   | 0.68 | B          |
| 2034                         | HDC Expressway                           | 90th Street to 110th Street      | 4     | 31,559                              | 60,000   | 0.53 | A          |
| 2035                         | HDC Expressway                           | 110th Street to Avenue Q         | 4     | 19,165                              | 60,000   | 0.32 | A          |
| 2036                         | HDC Principal Arterial                   | Avenue T to SR138                | 4     | 12,809                              | 60,000   | 0.21 | A          |
| <b>Total LOS A through D</b> |  |                                  |       |                                     |          |      | <b>113</b> |
| <b>Total LOS E</b>           |  |                                  |       |                                     |          |      | <b>6</b>   |
| <b>Total LOS F</b>           |  |                                  |       |                                     |          |      | <b>5</b>   |
| <b>Total LOS Reported</b>    |  |                                  |       |                                     |          |      | <b>124</b> |

**Traffic Report**

Table 18 reports the link-based VMT, VHT, VHD, and average speeds by facility for the Palmdale SOI for all trips regardless of the trip origin or destination.

**Table 18: 2045 Base with High Desert Corridor Palmdale Sphere of Influence VMT/VHT by Facility Type for All Trips**

| Facility                 | AM Peak          |               |             |              | PM Peak          |               |             |              | Daily            |                |             |               |
|--------------------------|------------------|---------------|-------------|--------------|------------------|---------------|-------------|--------------|------------------|----------------|-------------|---------------|
|                          | VMT              | VHT           | Speed       | Delay        | VMT              | VHT           | Speed       | Delay        | VMT              | VHT            | Speed       | Delay         |
| Freeways                 | 312,614          | 6,131         | 51.0        | 1,665        | 373,363          | 6,101         | 61.2        | 768          | 1,403,737        | 22,764         | 61.7        | 2,711         |
| HOT facilities           | 0                | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0             |
| HOV facilities           | 72,021           | 1,328         | 54.2        | 299          | 72,002           | 1,122         | 64.2        | 94           | 149,952          | 2,535          | 59.2        | 393           |
| Expressways/<br>parkways | 81,889           | 1,455         | 56.3        | 218          | 115,712          | 2,056         | 56.3        | 309          | 398,295          | 6,736          | 59.1        | 731           |
| Principal arterials      | 205,935          | 5,348         | 38.5        | 922          | 306,588          | 7,915         | 38.7        | 1,282        | 1,144,438        | 27,929         | 41.0        | 3,315         |
| Minor arterials          | 211,775          | 5,217         | 40.6        | 314          | 344,683          | 8,536         | 40.4        | 551          | 1,128,747        | 27,502         | 41.0        | 1,233         |
| Major collectors         | 105,296          | 3,013         | 34.9        | 460          | 161,020          | 4,418         | 36.4        | 490          | 511,576          | 13,631         | 37.5        | 1,108         |
| Minor collectors         | 2,094            | 58            | 36.0        | 2            | 3,219            | 109           | 29.5        | 19           | 10,866           | 335            | 32.4        | 32            |
| Freeway ramps            | 15,259           | 592           | 25.8        | 194          | 22,687           | 930           | 24.4        | 331          | 77,100           | 2,927          | 26.3        | 865           |
| Truck lanes only         | 0                | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0             |
| Centroid<br>connectors   | 72,075           | 2,827         | 25.5        | 0            | 119,703          | 4,696         | 25.5        | 0            | 399,047          | 15,663         | 25.5        | 0             |
| <b>Total—All Links</b>   | <b>1,078,958</b> | <b>25,970</b> | <b>41.5</b> | <b>4,074</b> | <b>1,518,977</b> | <b>35,883</b> | <b>42.3</b> | <b>3,843</b> | <b>5,223,759</b> | <b>120,023</b> | <b>43.5</b> | <b>10,388</b> |

**Summary**

Daily trips are defined as having an origin, destination or both within the Palmdale SOI, and excludes pass-through trips. The Palmdale trips generate a VMT of 8,868,517 and a VHT of 335,887 on all the roadway way facilities within the SCAG region. The Palmdale SOI only accounts for 27.5 percent of the total VMT generated, Lancaster accounts for 12.6 percent, and the High Desert region accounts for 3.3 percent. The rest of Los Angeles County accounts for 32.5 percent.

The average trip length for trips originating and staying within the Palmdale SOI is 4.46 miles and this constitutes 71.9 percent of all the Palmdale trips. The average trip length for trips originating in the Palmdale SOI and having a destination anywhere in the SCAG region including itself is 11.62 miles.

Daily segment-based LOS results show the number of segments operating at LOS E is six and LOS F is five and accounts for 4.8 percent and 4.0 percent, respectively, of all the segments analyzed.

The Palmdale transportation network as a system, which includes all roadway facilities within the Palmdale SOI, generates 5,223,759 VMT, 120,023 VHT and 10,388 VHD daily. This accounts for all trips, including pass through trips, using the highway network within the Palmdale SOI.



## 2045 PREFERRED PLAN

The 2045 Base dataset was used for 2045 Preferred Plan scenario and the network assumptions are consistent with the RTP. The 2045 socio-economic data for the Palmdale SOI was updated based on the 2045 Preferred Plan used for the Palmdale General Plan update. The socio-economic data outside the Palmdale SOI is consistent with the SCAG assumptions for the region in the year 2040. The SCAG four-step model procedures were run with the updated planning variables in the Palmdale SOI. Table 19 reports the land use assumptions for the region.

The 2045 Base Highway network was reviewed by the City of Palmdale for the 2045 Preferred Plan and based on their recommendations, the highway network was updated. In addition, High-Speed Rail ridership at the Palmdale station was incorporated into the highway assignment procedures.

**Table 19: 2045 Preferred Plan Socio-Economic Forecast**

|                              | Population        | Households       | Employment       |
|------------------------------|-------------------|------------------|------------------|
| Palmdale sphere              | 225,692           | 70,618           | 74,804           |
| Lancaster sphere             | 218,843           | 69,963           | 59,678           |
| High Desert region           | 40,845            | 14,409           | 5,030            |
| Ventura County               | 282,025           | 92,482           | 101,050          |
| Los Angeles County remainder | 11,001,144        | 3,783,739        | 5,117,195        |
| Orange County                | 3,460,381         | 1,152,340        | 1,898,952        |
| Riverside County             | 3,183,378         | 1,054,557        | 1,174,500        |
| San Bernardino County        | 2,731,308         | 854,360          | 1,028,132        |
| Imperial County              | 965,566           | 312,223          | 419,808          |
| Externals                    | 0                 | 0                | 0                |
| Seaport/airport              | 0                 | 0                | 0                |
| <b>Total Region</b>          | <b>22,109,182</b> | <b>7,404,691</b> | <b>9,879,149</b> |

Select zone traffic assignment procedures were performed on the zones within the Palmdale SOI to produce trips that were generated or attracted to Palmdale SOI only. All other trips were not counted, as they were pass through trips. The daily average trip lengths for Palmdale only trips to different locations are shown in Table 20. The daily link-based VMT, VHT, and the average speeds by facility types are shown in Table 21 for Palmdale SOI only trips. The daily percent share of VMT for trips originating in the Palmdale SOI to all areas in the region, including Palmdale, is illustrated in Figure 12.

**Table 20: 2045 Preferred Plan Palmdale Sphere of Influence (II and IX) Average Trip Length**

| From/To                 | Trip Length (II and IX*) (miles) | Percent Share of Trips |
|-------------------------|----------------------------------|------------------------|
| Palmdale sphere         | 4.44                             | 70.8%                  |
| Lancaster sphere        | 8.99                             | 17.2%                  |
| High Desert region      | 16.32                            | 2.7%                   |
| Imperial County         | 224.68                           | 0.0%                   |
| Los Angeles County      | 54.94                            | 5.4%                   |
| Orange County           | 108.77                           | 0.3%                   |
| Riverside County        | 106.06                           | 0.3%                   |
| San Bernardino County   | 61.08                            | 1.5%                   |
| Ventura County          | 76.42                            | 0.4%                   |
| Externals               | 68.00                            | 1.1%                   |
| Seaport/airport         | 38.84                            | 0.3%                   |
| <b>Weighted Average</b> | <b>10.86</b>                     | <b>100.0%</b>          |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.

**Table 21: 2045 Preferred Plan Palmdale Sphere of Influence (II, IX and XI\*) Daily, VMT, VHT, Average Speed by Facility**

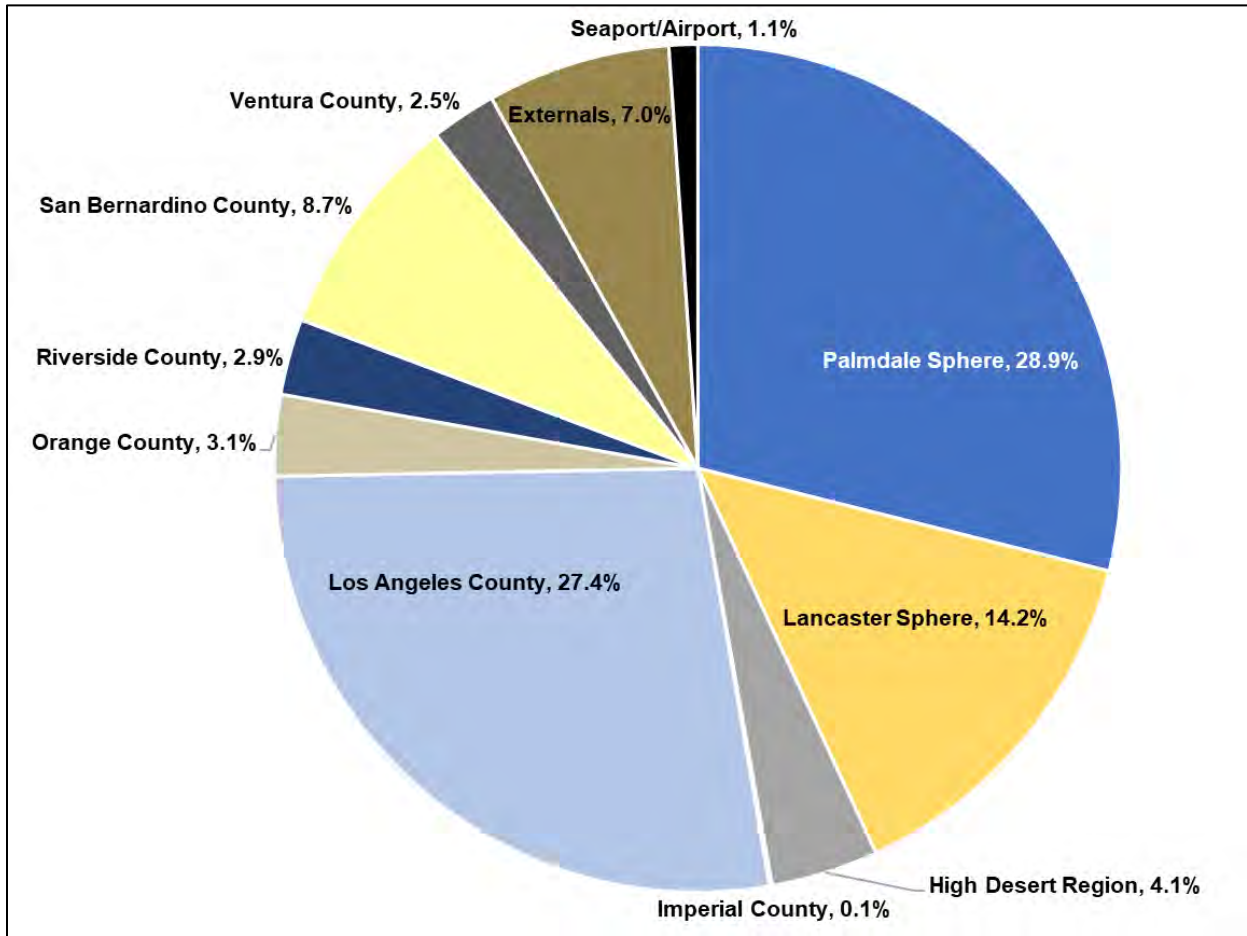
| Facility                          | VMT              | VHT            | Average Speed (mph) |
|-----------------------------------|------------------|----------------|---------------------|
| Freeways                          | 2,395,390        | 92,084         | 45.2                |
| HOT facilities                    | 7,911            | 230            | 63.4                |
| HOV facilities                    | 184,453          | 9,425          | 49.0                |
| Expressways/parkways              | 5,083            | 184            | 51.2                |
| Principal arterials               | 1,571,929        | 42,699         | 29.9                |
| Minor arterials                   | 1,821,834        | 50,209         | 30.5                |
| Major collectors                  | 1,075,565        | 30,851         | 23.7                |
| Minor connectors                  | 53,726           | 1,575          | 29.1                |
| Freeway ramps                     | 122,764          | 14,415         | 20.4                |
| Truck lanes only                  | 8,130            | 646            | 24.9                |
| Centroid connectors               | 480,325          | 19,048         | 24.4                |
| Total without centroid connectors | 7,246,785        | 242,319        | 35.5                |
| <b>Total of All Links</b>         | <b>7,727,110</b> | <b>261,367</b> | <b>34.5</b>         |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

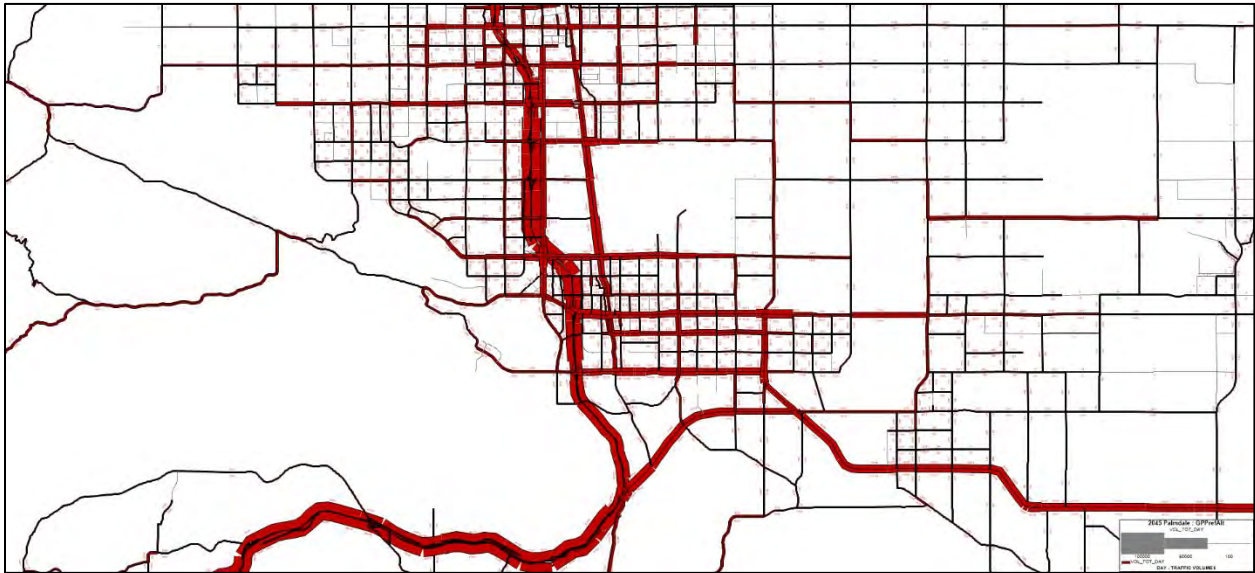
Figure 12: 2045 Preferred Plan Daily VMT Share Originating in Palmdale Sphere of Influence



**Traffic Report**

Traffic assignments were performed to produce traffic volumes on the various facilities inside and outside the Palmdale SOI. Traffic assignments are available for AM peak period, mid-day period, PM peak period, evening period, night period and daily. The daily traffic assignment volumes (bandwidths) are shown in Figure 13. The post-processed daily assignment volumes and the LOS at various segments are reported in the Table 22.

**Figure 13: 2045 Preferred Plan Daily Traffic Volumes**



Traffic Report

| LINKID | Roadway Segments          |                                  | Lanes | 2045 Preferred Plan       |          |      |     |
|--------|---------------------------|----------------------------------|-------|---------------------------|----------|------|-----|
|        | Roadway                   | From/To                          |       | 2045PrefPlan_Tot_Flow_adj | Capacity | V/C  | LOS |
| 1001   | Columbia Way/Avenue M     | 10th Street W to Sierra Hwy      | 4     | 32,760                    | 36,000   | 0.91 | E   |
| 1002   | Columbia Way/Avenue M     | Sierra Hwy to 10th Street E      | 4     | 35,733                    | 36,000   | 0.99 | E   |
| 1003   | Columbia Way/Avenue M     | 10th Street E to 20th Street E   | 4     | 23,321                    | 36,000   | 0.65 | B   |
| 1004   | Columbia Way/Avenue M     | 20th Street E to 30th Street E   | 4     | 17,482                    | 36,000   | 0.49 | A   |
| 1005   | Columbia Way/Avenue M     | 30th Street E to 40th Street E   | 4     | 12,192                    | 36,000   | 0.34 | A   |
| 1006   | Columbia Way/Avenue M     | 40th Street E to 50th Street     | 4     | 14,334                    | 36,000   | 0.40 | A   |
| 1007   | Rancho Vista Ave/Avenue P | 50th Street W to Town Center Dr  | 4     | 16,758                    | 36,000   | 0.47 | A   |
| 1008   | Rancho Vista Ave/Avenue P | Town Center Dr to 30th Street W  | 4     | 20,985                    | 36,000   | 0.58 | A   |
| 1009   | Rancho Vista Ave/Avenue P | 30th Street W to 25th Street W   | 4     | 22,457                    | 54,000   | 0.42 | A   |
| 1010   | Rancho Vista Ave/Avenue P | 25th Street W to 20th Street W   | 4     | 27,509                    | 54,000   | 0.51 | A   |
| 1011   | Rancho Vista Ave/Avenue P | 20th Street W to 15th Street W   | 4     | 27,276                    | 54,000   | 0.51 | A   |
| 1012   | Rancho Vista Ave/Avenue P | 15th Street to 10th Street W     | 6     | 41,536                    | 54,000   | 0.77 | C   |
| 1013   | Rancho Vista Ave/Avenue P | 10th Street W to SR 14           | 6     | 35,290                    | 54,000   | 0.65 | B   |
| 1014   | Rancho Vista Ave/Avenue P | SR 14 to Country Club Dr         | 4     | 23,332                    | 54,000   | 0.43 | A   |
| 1015   | Rancho Vista Ave/Avenue P | Country Club Dr to Division St   | 4     | 26,481                    | 45,000   | 0.59 | A   |
| 1016   | Rancho Vista Ave/Avenue P | Division St to Sierra Hwy        | 4     | 22,334                    | 36,000   | 0.62 | B   |
| 1017   | East Avenue P             | Sierra Hwy to 8th Street E       | 4     | 37,052                    | 36,000   | 1.03 | F   |
| 1018   | East Avenue P             | 8th Street E to 15th Street E    | 4     | 27,698                    | 36,000   | 0.77 | C   |
| 1019   | East Avenue P             | 15th Street E to 20th Street E   | 4     | 30,657                    | 36,000   | 0.85 | D   |
| 1020   | East Avenue P             | 20th Street E to 25th Street E   | 4     | 23,798                    | 36,000   | 0.66 | B   |
| 1021   | East Avenue P             | 25th Street E to 30th Street E   | 4     | 18,896                    | 36,000   | 0.52 | A   |
| 1022   | Avenue Q                  | Trade Center Dr to 5th Street W  | 4     | 4,805                     | 36,000   | 0.13 | A   |
| 1023   | Avenue Q                  | Division Street to 6th Street E  | 2     | 8,053                     | 18,000   | 0.45 | A   |
| 1024   | Avenue Q                  | Sierra Hwy to 10th Street E      | 2     | 10,165                    | 18,000   | 0.56 | A   |
| 1025   | Avenue Q                  | 10th Street E to 20th Street E   | 2     | 8,349                     | 18,000   | 0.46 | A   |
| 1026   | Avenue Q                  | 20th Street E to 30th Street E   | 2     | 7,293                     | 18,000   | 0.41 | A   |
| 1027   | Avenue Q                  | 30th Street E to 40th Street E   | 2     | 7,814                     | 18,000   | 0.43 | A   |
| 1028   | Elizabeth Lake Rd         | 25th Street W to 20th Street W   | 4     | 20,874                    | 36,000   | 0.58 | A   |
| 1029   | Elizabeth Lake Rd         | 20th Street W to 15th Street W   | 4     | 16,038                    | 36,000   | 0.45 | A   |
| 1030   | Elizabeth Lake Rd         | 15th Street W to 10th Street W   | 4     | 19,583                    | 36,000   | 0.54 | A   |
| 1031   | Palmdale Blvd             | 10th Street W to Trade Center Dr | 4     | 22,179                    | 36,000   | 0.62 | B   |

Traffic Report

| LINKID | Roadway Segments         |                                   | Lanes | 2045 Preferred Plan       |          |      |     |
|--------|--------------------------|-----------------------------------|-------|---------------------------|----------|------|-----|
|        | Roadway                  | From/To                           |       | 2045PrefPlan_Tot_Flow_adj | Capacity | V/C  | LOS |
| 1032   | Palmdale Blvd            | Trade Center Dr to 5th Street W   | 4     | 17,785                    | 36,000   | 0.49 | A   |
| 1033   | Palmdale Blvd            | 5th Street W to State Route 14    | 4     | 27,366                    | 36,000   | 0.76 | C   |
| 1034   | Palmdale Blvd            | Division Street to 5th St E       | 6     | 25,510                    | 54,000   | 0.47 | A   |
| 1035   | Palmdale Blvd            | 5th Street E to 10th Street E     | 4     | 25,257                    | 36,000   | 0.70 | C   |
| 1036   | Palmdale Blvd            | 10th Street E to 15th Street E    | 4     | 25,869                    | 36,000   | 0.72 | C   |
| 1037   | Palmdale Blvd            | 15th Street E to 20th Street E    | 4     | 19,233                    | 36,000   | 0.53 | A   |
| 1038   | Palmdale Blvd            | 20th Street E to 25th Street E    | 4     | 24,649                    | 36,000   | 0.68 | B   |
| 1040   | Palmdale Blvd            | 40th Street E to 47th Street E    | 4     | 28,011                    | 36,000   | 0.78 | C   |
| 1041   | Palmdale Blvd            | 50th Street E to 60th Street E    | 4     | 23,700                    | 36,000   | 0.66 | B   |
| 1042   | Palmdale Blvd            | 70th Street E to 80th Street E    | 2     | 16,681                    | 18,000   | 0.93 | E   |
| 1043   | E Avenue R               | Sierra Hwy to 10th Street E       | 4     | 19,490                    | 36,000   | 0.54 | A   |
| 1044   | E Avenue R               | 10th Street E to 20th Street E    | 4     | 18,495                    | 36,000   | 0.51 | A   |
| 1045   | E Avenue R               | 20th Street E to 30th Street E    | 4     | 18,408                    | 36,000   | 0.51 | A   |
| 1046   | E Avenue R               | 30th Street E to 40th Street E    | 3     | 18,843                    | 36,000   | 0.52 | A   |
| 1047   | E Avenue R               | 40th Street E to 47th Street E    | 4     | 22,831                    | 36,000   | 0.63 | B   |
| 1048   | E Avenue R               | 47th Street E to 60th Street E    | 4     | 17,279                    | 36,000   | 0.48 | A   |
| 1049   | E Avenue R               | 60th Street E to 70th Street E    | 4     | 6,564                     | 36,000   | 0.18 | A   |
| 1050   | Avenue S                 | Tovey Avenue to Tierra Subida Ave | 4     | 10,895                    | 36,000   | 0.30 | A   |
| 1051   | Avenue S                 | Tierra Subida Ave to SR 14        | 4     | 17,336                    | 36,000   | 0.48 | A   |
| 1052   | Avenue S                 | SR 14 to 5th Street E             | 4     | 13,190                    | 36,000   | 0.37 | A   |
| 1053   | Avenue S                 | 5th Street E to Sierra Hwy        | 4     | 25,828                    | 36,000   | 0.72 | C   |
| 1054   | Avenue S                 | Sierra Hwy to 10th Street E       | 4     | 32,170                    | 36,000   | 0.89 | D   |
| 1055   | Avenue S                 | 10th Street E to 20th Street E    | 4     | 29,830                    | 36,000   | 0.83 | D   |
| 1056   | Avenue S                 | 20th Street E to 25th Street E    | 4     | 30,323                    | 36,000   | 0.84 | D   |
| 1057   | Avenue S                 | 25th Street E to 30th Street E    | 4     | 29,058                    | 36,000   | 0.81 | D   |
| 1058   | Avenue S                 | 30th Street E to 35th Street E    | 6     | 24,137                    | 54,000   | 0.45 | A   |
| 1059   | Avenue S                 | 35th Street E to 40th Street E    | 6     | 23,612                    | 54,000   | 0.44 | A   |
| 1060   | Avenue S                 | 40th Street E to 47th Street E    | 6     | 23,867                    | 54,000   | 0.44 | A   |
| 1061   | Avenue S                 | 47th Street E to 55th Street E    | 4     | 21,305                    | 36,000   | 0.59 | A   |
| 1062   | Pearblossom Hwy/Avenue T | Sierra Hwy to 25th Street E       | 4     | 52,520                    | 36,000   | 1.46 | F   |
| 1063   | Pearblossom Hwy/Avenue T | 25th Street E to 40th Street E    | 4     | 45,045                    | 36,000   | 1.25 | F   |

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| LINKID | Roadway Segments                |                                    | Lanes | 2045 Preferred Plan       |          |      |     |
|--------|---------------------------------|------------------------------------|-------|---------------------------|----------|------|-----|
|        | Roadway                         | From/To                            |       | 2045PrefPlan_Tot_Flow_adj | Capacity | V/C  | LOS |
| 1064   | Pearblossom Hwy/Avenue T        | 40th Street E to 47th Street E     | 4     | 31,951                    | 36,000   | 0.89 | D   |
| 1065   | Pearblossom Hwy/Avenue T        | 47th Street E to Fort Tejon Road   | 4     | 32,061                    | 36,000   | 0.89 | D   |
| 1066   | Pearblossom Hwy/Avenue T        | Fort Tejon Road to 70th Street E   | 4     | 22,190                    | 36,000   | 0.62 | B   |
| 1067   | 10th Street W/Tierra Subida Ave | W Avenue M to W Avenue N           | 4     | 15,186                    | 36,000   | 0.42 | A   |
| 1068   | 10th Street W/Tierra Subida Ave | W Avenue N to W Avenue O           | 4     | 22,897                    | 36,000   | 0.64 | B   |
| 1069   | 10th Street W/Tierra Subida Ave | W Avenue O to SR 14                | 4     | 17,627                    | 36,000   | 0.49 | A   |
| 1070   | 10th Street W/Tierra Subida Ave | SR 14 to Rancho Vista Blvd         | 6     | 35,324                    | 54,000   | 0.65 | B   |
| 1071   | 10th Street W/Tierra Subida Ave | Rancho Vista Blvd to Technology Dr | 6     | 37,661                    | 54,000   | 0.70 | B   |
| 1072   | 10th Street W/Tierra Subida Ave | Technology Dr to W Palmdale Blvd   | 5     | 47,477                    | 45,000   | 1.06 | F   |
| 1073   | 10th Street W/Tierra Subida Ave | W Palmdale Blvd to Rayburn Rd      | 4     | 18,512                    | 36,000   | 0.51 | A   |
| 1074   | Sierra Hwy                      | Columbia Way to E Avenue N         | 4     | 37,932                    | 36,000   | 1.05 | F   |
| 1075   | Sierra Hwy                      | E Avenue N to E Avenue O           | 4     | 36,183                    | 36,000   | 1.01 | F   |
| 1076   | Sierra Hwy                      | E Avenue O to E Avenue P           | 4     | 53,660                    | 36,000   | 1.49 | F   |
| 1077   | Sierra Hwy                      | E Avenue P to E Avenue Q           | 4     | 14,366                    | 36,000   | 0.40 | A   |
| 1078   | Sierra Hwy                      | E Avenue Q to Palmdale Blvd        | 4     | 15,253                    | 36,000   | 0.42 | A   |
| 1079   | Sierra Hwy                      | Palmdale Blvd to E Avenue R        | 4     | 9,993                     | 36,000   | 0.28 | A   |
| 1080   | Sierra Hwy                      | E Avenue R to E Avenue S           | 4     | 7,289                     | 36,000   | 0.20 | A   |
| 1081   | Sierra Hwy                      | E Avenue S to Pearblossom Hwy      | 4     | 8,070                     | 36,000   | 0.22 | A   |
| 1082   | 10th Street E                   | E Avenue P to E Avenue Q           | 2     | 2,357                     | 18,000   | 0.13 | A   |
| 1083   | 10th Street E                   | E Avenue Q to E Palmdale Blvd      | 4     | 5,732                     | 36,000   | 0.16 | A   |
| 1084   | 10th Street E                   | E. Palmdale Blvd to Avenue R       | 2     | 5,756                     | 18,000   | 0.32 | A   |
| 1085   | 10th Street E                   | Avenue R to Avenue S1              | 2     | 3,898                     | 18,000   | 0.22 | A   |
| 1086   | 20th Street E                   | E Avenue P to E Avenue Q           | 2     | 6,362                     | 18,000   | 0.35 | A   |
| 1087   | 20th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 9,746                     | 18,000   | 0.54 | A   |
| 1088   | 20th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 13,063                    | 36,000   | 0.36 | A   |
| 1089   | 20th Street E                   | E Avenue R to E Avenue S           | 4     | 12,938                    | 36,000   | 0.36 | A   |
| 1090   | 25th Street E                   | E Avenue P to E Avenue Q           | 2     | 8,624                     | 18,000   | 0.48 | A   |
| 1091   | 25th Street E                   | E Avenue Q to Palmdale Blvd        | 2     | 8,947                     | 18,000   | 0.50 | A   |
| 1092   | 25th Street E                   | Palmdale Blvd to E Avenue R        | 4     | 13,007                    | 36,000   | 0.36 | A   |
| 1093   | 25th Street E                   | E Avenue R to E Avenue S           | 4     | 16,629                    | 36,000   | 0.46 | A   |
| 1094   | 25th Street E                   | E Avenue S to Pearblossom Hwy      | 4     | 14,269                    | 36,000   | 0.40 | A   |

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| LINKID                       | Roadway Segments                        |                                  | Lanes | 2045 Preferred Plan       |          |      |            |
|------------------------------|---|----------------------------------|-------|---------------------------|----------|------|------------|
|                              | Roadway                                 | From/To                          |       | 2045PrefPlan_Tot_Flow_adj | Capacity | V/C  | LOS        |
| 1095                         | 30th Street E                           | E Avenue P to E Avenue Q         | 2     | 7,961                     | 18,000   | 0.44 | A          |
| 1096                         | 30th Street E                           | E Avenue Q to Palmdale Blvd      | 2     | 7,821                     | 18,000   | 0.43 | A          |
| 1097                         | 30th Street E                           | Palmdale Blvd to E Avenue R      | 4     | 8,354                     | 36,000   | 0.23 | A          |
| 1098                         | 30th Street E                           | E Avenue R to E Avenue S         | 4     | 8,871                     | 36,000   | 0.25 | A          |
| 1099                         | 40th Street E                           | E Avenue P to E Avenue Q         | 2     | 11,891                    | 18,000   | 0.66 | B          |
| 1100                         | 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 2     | 7,185                     | 18,000   | 0.40 | A          |
| 1101                         | 40th Street E                           | E Palmdale Blvd to E Avenue R    | 3     | 14,092                    | 27,000   | 0.52 | A          |
| 1102                         | 40th Street E                           | E Avenue R to E Avenue S         | 3     | 12,432                    | 27,000   | 0.46 | A          |
| 1103                         | 40th Street E                           | E Avenue S to Sierra Hwy         | 2     | 10,612                    | 18,000   | 0.59 | A          |
| 1104                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 2     | 22,987                    | 18,000   | 1.28 | F          |
| 1105                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 2     | 16,180                    | 18,000   | 0.90 | D          |
| 1106                         | 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 4     | 26,588                    | 36,000   | 0.74 | C          |
| 1107                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 4     | 26,908                    | 36,000   | 0.75 | C          |
| 1108                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 4     | 19,854                    | 36,000   | 0.55 | A          |
| 1109                         | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 5     | 28,816                    | 45,000   | 0.64 | B          |
| 1110                         | 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearblossom Hwy      | 4     | 24,367                    | 36,000   | 0.68 | B          |
| 1111                         | 47th Street E/50th Street E/Ft Tejon Rd | Pearblossom Hwy to E Avenue T-8  | 4     | 30,811                    | 36,000   | 0.86 | D          |
| 1120                         | Technology Dr                           | 10th Street W to Trade Center Dr | 4     | 7,277                     | 36,000   | 0.20 | A          |
| 1121                         | Technology Dr                           | 5th Street W to Division St      | 4     | 7,574                     | 36,000   | 0.21 | A          |
| 1122                         | Technology Dr                           | Division St to Sierra Hwy        | 4     | 7,805                     | 36,000   | 0.22 | A          |
| <b>Total LOS A through D</b> |   |                                  |       |                           |          |      | <b>102</b> |
| <b>Total LOS E</b>           |   |                                  |       |                           |          |      | <b>3</b>   |
| <b>Total LOS F</b>           |   |                                  |       |                           |          |      | <b>8</b>   |
| <b>Total LOS Reported</b>    |   |                                  |       |                           |          |      | <b>113</b> |



**Traffic Report**

Table 23 reports the link-based VMT, VHT, VHD, and average speeds by facility for the Palmdale SOI for all trips regardless of trip origin or destination.

**Table 23: 2045 Preferred Plan Palmdale Sphere of Influence VMT/VHT by Facility Type for All Trips**

| Facility                 | AM Peak        |               |             |              | PM Peak          |               |             |              | Daily            |                |             |              |
|--------------------------|----------------|---------------|-------------|--------------|------------------|---------------|-------------|--------------|------------------|----------------|-------------|--------------|
|                          | VMT            | VHT           | Speed       | Delay        | VMT              | VHT           | Speed       | Delay        | VMT              | VHT            | Speed       | Delay        |
| Freeways                 | 243,132        | 4,149         | 58.6        | 675          | 294,514          | 4,620         | 63.7        | 413          | 1,063,365        | 16,410         | 64.8        | 1,219        |
| HOT facilities           | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| HOV facilities           | 50,509         | 776           | 65.1        | 55           | 41,547           | 598           | 69.5        | 4            | 99,507           | 1,480          | 67.2        | 59           |
| Expressways/<br>parkways | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| Principal arterials      | 225,647        | 6,006         | 37.6        | 1,038        | 330,852          | 8,917         | 37.1        | 1,601        | 1,208,274        | 30,538         | 39.6        | 3,914        |
| Minor arterials          | 262,849        | 6,443         | 40.8        | 449          | 420,218          | 10,415        | 40.3        | 824          | 1,382,559        | 33,333         | 41.5        | 1,738        |
| Major collectors         | 110,627        | 2,819         | 39.2        | 212          | 157,278          | 3,986         | 39.5        | 250          | 492,059          | 12,273         | 40.1        | 563          |
| Minor collectors         | 5,977          | 144           | 41.5        | 2            | 7,070            | 178           | 39.6        | 6            | 19,576           | 497            | 39.4        | 12           |
| Freeway ramps            | 11,299         | 537           | 21.1        | 197          | 15,858           | 759           | 20.9        | 286          | 55,388           | 2,412          | 23.0        | 754          |
| Truck lanes only         | 0              | 0             | 0.0         | 0            | 0                | 0             | 0.0         | 0            | 0                | 0              | 0.0         | 0            |
| Centroid<br>connectors   | 67,697         | 2,650         | 25.5        | 0            | 109,639          | 4,293         | 25.5        | 0            | 364,492          | 14,297         | 25.5        | 0            |
| <b>Total—All Links</b>   | <b>977,736</b> | <b>23,524</b> | <b>41.6</b> | <b>2,628</b> | <b>1,376,977</b> | <b>33,764</b> | <b>40.8</b> | <b>3,384</b> | <b>4,685,219</b> | <b>111,241</b> | <b>42.1</b> | <b>8,259</b> |

**Summary**

Daily trips are defined as having an origin, destination or both within the Palmdale SOI and do not include pass-through trips. The Palmdale trips generate a VMT of 7,727,110 and a VHT of 261,367 on all the roadway facilities within the SCAG region. The Palmdale SOI only accounts for 28.9 percent of the total VMT generated, Lancaster accounts for 14.2 percent, and the High Desert region accounts for 4.1 percent. The rest of Los Angeles County accounts for 27.4 percent.

The average trip length for trips originating and staying within the Palmdale SOI is 4.44 miles, constituting 70.8 percent of all Palmdale trips. The average trip length for trips originating in the Palmdale SOI and having a destination anywhere in the SCAG region including itself is 10.86 miles.

Daily segment-based LOS results show the number of segments operating at LOS E is three and LOS F is eight and accounts for 2.7 percent and 7.1 percent, respectively, of all the segments analyzed.

The Palmdale transportation network as a system, which includes all roadway facilities within the Palmdale SOI, generates 4,685,219 VMT, 111,241 VHT and 8,259 VHD daily. This accounts for all trips, including pass through trips, using the highway network within the Palmdale SOI.

## Measures of Effectiveness

Measures of effectiveness (MOE) metrics can be used for scenarios to predict the effects of a project on the transportation network in Palmdale as a “system.” Some of the more important metrics include the change in VMT, VHT, and VHD between the project and no-project scenarios. Delay represents the amount of time lost for vehicles from the free-flow condition. If delay decreases, then the transportation network as a system will have improved performance with better operations and travel speeds. This is also in line with VMT as a metric that is being used for project-related impacts. Level of service metrics can still be used for intersection operations analysis and segment levels of service for an area defined around the project.

Measures of effectiveness were computed for all scenarios for the Palmdale General Plan.

Table 24 shows the various statistics for the home-based and all trip purposes for the Palmdale SOI under all scenarios. The average trip lengths for home-based work, home-based trips and all trip purposes decrease in the future Palmdale GP scenarios, which in turn reduces the VMT generated. The VMT per capita and the VMT per employee also decrease. In addition, the average trip lengths for the 2045 Preferred Plan scenario decreases. All these reductions effectively contribute toward the overall reduction in VMT and thereby improve the air quality by reducing the emissions of greenhouse gases and CO<sub>2</sub>.

Table 25 presents the percent share of VMT generated by trips between the Palmdale SOI and other areas of the SCAG region. The intra-Palmdale VMT increased in the 2045 Preferred Plan scenario, reducing VMT to other areas as designed using smart growth assumptions (e.g., a good mixture of households and employment and transit-oriented developments). Palmdale, an exporter of workers, now finds itself being less of an exporter with smart growth initiatives and striving toward being self-contained as evident by the reduction in the VMT to other regions and the increase in VMT to the Palmdale sphere of influence and neighboring areas (e.g., Lancaster and the High Desert Region). The VMT to other parts of Los Angeles and Orange counties dropped from 46 to 36 percent, a decrease of 10 percent, primarily due to the reduced number of longer trips.

Table 26 displays the link-based daily VMT generated by the SCAG model for the different facility types having an origin or destination in the Palmdale sphere of influence. Trips which are pass-through in nature, where they do not have an origin or destination in the Palmdale SOI are not counted. The future year Palmdale Preferred Plan has the lowest VMT among all the scenarios, reflecting shorter trip lengths to and from the Palmdale sphere of influence.

**Table 24: Trip Purpose Statistics**

| Palmdale Sphere—Statistics                | 2017 Existing | 2045 Base | 2045 Preferred Plan |
|---|---------------|-----------|---------------------|
| Home-based work trips—VMT per capita      | 16.43         | 14.54     | 8.85                |
| Home-based work trips—average trip length | 31.57         | 31.10     | 21.59               |
| Home-based all trips—VMT per capita       | 26.19         | 23.20     | 16.57               |
| Home-based all trips—average trip length  | 16.49         | 15.63     | 12.62               |
| All trips—VMT per service population      | 34.30         | 30.60     | 27.00               |
| All trips—average trip length             | 11.87         | 11.56     | 10.86               |

**Table 25: VMT between Palmdale Sphere and Areas within the SCAG Region**

| Percent VMT  | 2017 Existing | 2045 Base     | 2045 Preferred Plan |
|--|---------------|---------------|---------------------|
| Within Palmdale sphere   | 14.4%         | 15.9%         | 16.9%               |
| Within Palmdale/Lancaster/High Desert region   | 33.4%         | 34.4%         | 38.3%               |
| Between Palmdale and LA County/Orange County   | 45.9%         | 41.9%         | 35.6%               |
| Between Palmdale and remainder of SCAG region and external trips from outside the region | 20.7%         | 23.8%         | 26.1%               |
| <b>Total</b>   | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b>       |

**Table 26: VMT to/from Palmdale Sphere to Areas within the SCAG Region by Facility Type**

| Facility Type       | 2017 Existing    | 2045 Base        | 2045 Preferred Plan |
|---------------------|------------------|------------------|---------------------|
| Freeways            | 2,893,868        | 2,945,756        | 2,395,390           |
| HOT facilities      | 11,431           | 9,285            | 7,911               |
| HOV facilities      | 284,701          | 284,422          | 184,453             |
| Expressway/parkway  | 4,381            | 5,650            | 5,083               |
| Principal arterials | 1,484,072        | 1,671,644        | 1,571,929           |
| Minor arterials     | 1,631,560        | 1,897,218        | 1,821,834           |
| Major collectors    | 1,067,379        | 1,321,027        | 1,075,565           |
| Minor collectors    | 41,916           | 43,307           | 53,726              |
| Freeway ramps       | 152,550          | 156,041          | 122,764             |
| Truck lanes only    | 6,323            | 7,485            | 8,130               |
| Centroid connectors | 450,545          | 520,432          | 480,325             |
| <b>Total</b>        | <b>8,028,726</b> | <b>8,862,268</b> | <b>7,727,110</b>    |

Table 27 displays the link-based daily VMT, VHT, VHD, and average speeds for the Palmdale transportation network as a system that includes all roadway facilities within the Palmdale SOI. The summary statistics include all trips generated by the SCAG model regardless of whether the trip begins or ends within the Palmdale SOI. All trips using the highway network within the Palmdale SOI are counted.

**Table 27: VMT for All Links within the Palmdale Sphere of Influence**

| All Trips Generated within or Passing through Palmdale Sphere (II, IX-XI and XX)* | 2017 Existing | 2045 Base | 2045 Preferred Plan |
|---|---------------|-----------|---------------------|
| Daily VMT (miles)   | 4,275,553     | 5,029,773 | 4,685,219           |
| Daily VHT (hours)   | 100,085       | 123,190   | 111,241             |
| Daily delay (hours)   | 6,783         | 12,590    | 8,259               |
| Average speed (mph)   | 42.7          | 40.8      | 42.1                |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

XX = External-to-external trips, where both the origin and destination of the trips could be anywhere in the SCAG region

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The link-based performance statistics for the roadway facilities within the Palmdale SOI are shown in Table 28. The VMT, VHT, and VHD are reported for daily and AM and PM peak periods for all the scenarios. These metrics are lower in the 2045 Preferred Plan than in the 2045 base scenario. The VHD decreases by more than 30 percent, suggesting that the Palmdale transportation network as a system is performing exceptionally well. The delay represents the degradation of the system from free-flow conditions where there is minimal or no delay. The congested speeds on the system have also improved.

**Table 28: Performance Statistics by Facility Type within the Palmdale Sphere of Influence**

| Performance Measurement               | Facility Type         | Palmdale Sphere of Influence Analysis |                |                     |
|---------------------------------------|-----------------------|---------------------------------------|----------------|---------------------|
|                                       |                       | 2017 Existing                         | 2045 Base      | 2045 Preferred Plan |
| Daily VMT (thousands)                 | Freeways              | 1,203.1                               | 1,327.1        | 1,162.9             |
|                                       | Arterials             | 2,197.7                               | 2,658.9        | 2,590.8             |
|                                       | Other                 | 874.8                                 | 1,043.8        | 931.5               |
|                                       | <b>All Facilities</b> | <b>4,275.6</b>                        | <b>5,029.8</b> | <b>4,685.2</b>      |
| AM and PM peak period VMT (thousands) | Freeways              | 646.4                                 | 712.9          | 629.7               |
|                                       | Arterials             | 1,049.5                               | 1,246.6        | 1,239.6             |
|                                       | Other                 | 445.4                                 | 533.5          | 485.4               |
|                                       | <b>All Facilities</b> | <b>2,141.3</b>                        | <b>2,493.1</b> | <b>2,354.7</b>      |
| Daily VHT (thousands)                 | Freeways              | 18.8                                  | 21.9           | 17.9                |
|                                       | Arterials             | 53.3                                  | 67.4           | 63.9                |
|                                       | Other                 | 28.0                                  | 33.9           | 29.5                |
|                                       | <b>All Facilities</b> | <b>100.1</b>                          | <b>123.2</b>   | <b>111.2</b>        |
| AM and PM peak period VHT (thousands) | Freeways              | 10.7                                  | 12.9           | 10.1                |
|                                       | Arterials             | 26.4                                  | 33.2           | 31.8                |
|                                       | Other                 | 14.5                                  | 17.6           | 15.4                |
|                                       | <b>All Facilities</b> | <b>51.6</b>                           | <b>63.7</b>    | <b>57.3</b>         |
| Daily VHD (thousands)                 | Freeways              | 1.6                                   | 2.9            | 1.3                 |
|                                       | Arterials             | 3.6                                   | 7.4            | 5.7                 |
|                                       | Other                 | 1.5                                   | 2.2            | 1.3                 |
|                                       | <b>All Facilities</b> | <b>6.8</b>                            | <b>12.6</b>    | <b>8.3</b>          |
| AM and PM peak period VHD (thousands) | Freeways              | 1.5                                   | 2.7            | 1.1                 |
|                                       | Arterials             | 2.7                                   | 5.1            | 3.9                 |
|                                       | Other                 | 1.1                                   | 1.6            | 1.0                 |
|                                       | <b>All Facilities</b> | <b>5.3</b>                            | <b>9.4</b>     | <b>6.0</b>          |

Table 29 summarizes the level of service for all the scenarios showing segments with LOS E and LOS F. There are eleven segments with LOS E or LOS F in the 2045 Preferred Plan scenario, of which five have similar level of service in the 2017 Existing Counts scenario.

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Table 29. Summary of Roadway Segments at Level of Service E or F

| LINKID                   | Roadway Segments                        |                                  | Level of Service     |                     |           |                    |                     |
|--------------------------|---|----------------------------------|----------------------|---------------------|-----------|--------------------|---------------------|
|                          |   |                                  | 2017 Existing Counts | 2017 Existing Model | 2045 Base | 2045 Base with HDC | 2045 Preferred Plan |
|                          | Roadway                                 | From/To                          |                      |                     |           |                    |                     |
| 1001                     | Columbia Way/Avenue M                   | 10th Street W to Sierra Hwy      | B                    | A                   | D         | D                  | E                   |
| 1002                     | Columbia Way/Avenue M                   | Sierra Hwy to 10th Street E      | C                    | A                   | E         | D                  | E                   |
| 1015                     | Rancho Vista Ave/Avenue P               | Country Club Dr to Division St   | C                    | F                   | B         | A                  | A                   |
| 1016                     | Rancho Vista Ave/Avenue P               | Division St to Sierra Hwy        | B                    | F                   | B         | B                  | B                   |
| 1017                     | East Avenue P                           | Sierra Hwy to 8th Street E       | E                    | C                   | F         | E                  | F                   |
| 1019                     | East Avenue P                           | 15th Street E to 20th Street E   | B                    | B                   | E         | B                  | D                   |
| 1035                     | Palmdale Blvd                           | 5th Street E to 10th Street E    | C                    | E                   | A         | A                  | C                   |
| 1042                     | Palmdale Blvd                           | 70th Street E to 80th Street E   | E                    | F                   | E         | E                  | E                   |
| 1054                     | Avenue S                                | Sierra Hwy to 10th Street E      | D                    | F                   | F         | D                  | D                   |
| 1055                     | Avenue S                                | 10th Street E to 20th Street E   | D                    | E                   | E         | D                  | D                   |
| 1056                     | Avenue S                                | 20th Street E to 25th Street E   | D                    | E                   | E         | D                  | D                   |
| 1057                     | Avenue S                                | 25th Street E to 30th Street E   | D                    | E                   | D         | D                  | D                   |
| 1062                     | Pearblossom Hwy/Avenue T                | Sierra Hwy to 25th Street E      | F                    | F                   | F         | F                  | F                   |
| 1063                     | Pearblossom Hwy/Avenue T                | 25th Street E to 40th Street E   | F                    | E                   | F         | F                  | F                   |
| 1064                     | Pearblossom Hwy/Avenue T                | 40th Street E to 47th Street E   | B                    | A                   | E         | D                  | D                   |
| 1065                     | Pearblossom Hwy/Avenue T                | 47th Street E to Fort Tejon Road | B                    | A                   | E         | D                  | D                   |
| 1066                     | Pearblossom Hwy/Avenue T                | Fort Tejon Road to 70th Street E | A                    | A                   | E         | D                  | B                   |
| 1072                     | 10th Street W/Tierra Subida Ave         | Technology Dr to W Palmdale Blvd | D                    | A                   | F         | E                  | F                   |
| 1074                     | Sierra Hwy                              | Columbia Way to E Avenue N       | C                    | B                   | D         | D                  | F                   |
| 1075                     | Sierra Hwy                              | E Avenue N to E Avenue O         | C                    | B                   | E         | D                  | F                   |
| 1076                     | Sierra Hwy                              | E Avenue O to E Avenue P         | D                    | C                   | F         | F                  | F                   |
| 1095                     | 30th Street E                           | E Avenue P to E Avenue Q         | A                    | A                   | A         | E                  | A                   |
| 1099                     | 40th Street E                           | E Avenue P to E Avenue Q         | A                    | A                   | A         | F                  | B                   |
| 1104                     | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | F                    | A                   | F         | F                  | F                   |
| 1105                     | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | C                    | A                   | D         | E                  | D                   |
| 1107                     | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | C                    | D                   | E         | E                  | C                   |
| 1111                     | 47th Street E/50th Street E/Ft Tejon Rd | Pearblossom Hwy to E Avenue T-8  | A                    | C                   | E         | B                  | D                   |
| <b>Total LOS E</b>       |   |                                  | <b>2</b>             | <b>5</b>            | <b>11</b> | <b>6</b>           | <b>3</b>            |
| <b>Total LOS F</b>       |   |                                  | <b>3</b>             | <b>5</b>            | <b>7</b>  | <b>5</b>           | <b>8</b>            |
| <b>Total LOS E and F</b> |   |                                  | <b>5</b>             | <b>10</b>           | <b>18</b> | <b>11</b>          | <b>11</b>           |

Figures 14 through 16 illustrate the comparison of scenarios by facility types. The figures clearly show the 2045 Preferred Plan scenario performs very well compared to the 2045 Base scenario.

**Figure 14: Daily VMT by Facility Type within the Palmdale Sphere of Influence for All Scenarios**

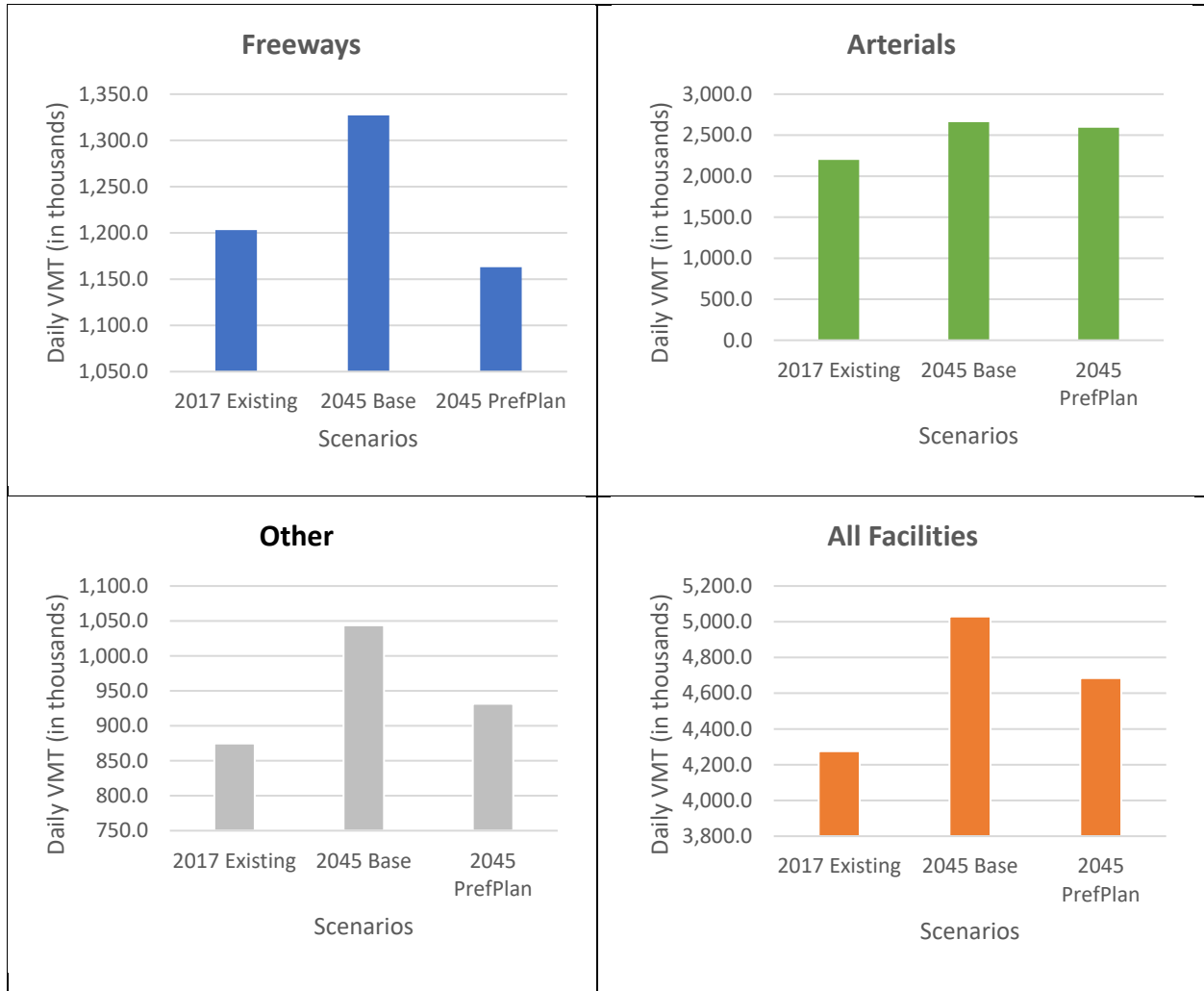


Figure 15: Daily VHT by Facility Type within the Palmdale Sphere of Influence for All Scenarios



Figure 16: Daily VHD by Facility Type within the Palmdale Sphere of Influence for All Scenarios



### Summary

The 2045 Preferred Plan scenario significantly reduces home-based work VMT per capita compared to the 2017 Existing scenario. This is validated by average trip lengths that are more than 30 percent shorter. The average trip length for all home-based trips in the 2045 Preferred Plan scenario decreases by 23 percent from the 2017 Existing scenario. The VMT per service population also decreases by more than 22 percent, and the average trips length for all trips decreases by 8 percent. The VMT generated by the 2045 Preferred Plan scenario from the Palmdale sphere of influence to the entire SCAG region also reduces by about four percent. The significant decrease in VMT as seen above contributes to the reduction in greenhouse gases and effectively contributes to SB 743 compliance.

The VMT for all trips (II, IX, XI and XX) using the Palmdale Transportation Network, regardless of their origin or destination also decreases by seven percent when comparing the 2045 Preferred Plan to the 2045 Base scenario. The VHT also decreases by 10 percent. Most importantly, the VHD (which reflects the performance of the system) reduces by 34 percent. This reduction in delay makes the Palmdale transportation network as a system operate exceptionally well when compared to the 2045 Base scenario. Better operating conditions result in higher speeds and lower greenhouse gas emissions.



# Vehicle Miles Traveled Impact Criteria Analysis

## SB 743 OVERVIEW

On September 27, 2013, Governor Jerry Brown signed SB 743 into law to start a process intended to fundamentally change transportation impact analysis as part of CEQA compliance. In response to SB 743, the Office of Planning and Research (OPR) selected vehicle miles of travel (VMT) as the new transportation impact metric. The OPR then submitted updates to the CEQA Guidelines and these updates were certified by the Natural Resources Agency in December 2018. Lead agencies have been granted a grace period until July 1, 2020 to opt-in to implementing a VMT analysis as part of the environmental review process.

*CEQA refers to the California Environmental Quality Act. This statute requires identification of any significant environmental impacts of state or local action including approval of new development or infrastructure projects. The process of identifying these impacts is typically referred to as the environmental review process.*

Accordingly, SB 743 eliminates level of service (LOS) as the basis for determining significant transportation impacts under CEQA and provides a new performance metric – VMT. With this change, the State is shifting the focus from measuring a project’s impact to drivers (LOS) to measuring the impact of driving (VMT) to achieve the goals of reducing greenhouse gas (GHG) emissions, encouraging infill development, and improving public health through active transportation.

The OPR produced a Technical Advisory to assist lead agencies with the implementation of SB 743 by steering lead agencies toward the variety of implementation questions they face with respect to shifting to a VMT metric. However, lead agencies must continue to make specific decisions regarding VMT methodology, thresholds, and mitigation that are consistent with the county’s goals as expressed in their relevant plans and policies.

## PROJECTS AFFECTED BY SB 743

Two types of projects, land use development projects and transportation infrastructure projects, are affected by SB 743.

- **Land Use:** Development projects and plans (e.g., Community Plan or Specific Plan) will continue to require a transportation impact analysis. However, transportation impact studies conducted as part of the CEQA process will now be required to base project impacts on VMT. In addition, some projects, such as those located adjacent to transit, may be screened from requiring a detailed VMT analysis.
- **Transportation Infrastructure:** Prior to SB 743, transportation projects that had the potential to worsen vehicle delay, such as narrowing a roadway to enhance travel for bicyclists and pedestrians, may result in an environmental impact under CEQA. With SB 743 in place, transportation projects that promote travel by non-auto modes are no longer considered to result in an environmental impact. Roadway widening projects will now need to consider the potential to induce vehicle travel demand due to increased capacities, which may make driving a more attractive travel option.

SB 743 does not prevent a jurisdiction from continuing to analyze LOS as part of the development review process to determine if transportation improvements are needed to accommodate the proposed land uses, but LOS will no longer constitute the basis for CEQA impacts.

## LOS ANGELES COUNTY VMT IMPLEMENTATION

Los Angeles County updated its *Transportation Impact Report Guidelines* in July 2020 to lay forth the requirements for CEQA and non-CEQA sections of transportation studies.

The updated CEQA guidelines contains a new section to determine the significance of transportation impacts (Section 15064.3). While OPR's Technical Advisory helped lead agencies regarding the variety of implementation questions to consider when adopting the new CEQA guidance, lead agencies must still make their own specific decisions about VMT methodology, thresholds, and mitigation.

The Los Angeles County guidance states that the Public Works Department will (generally) require the preparation and submission of a transportation impact analysis for projects that meet the following criteria.

- **Development Projects**
  - Estimated to generate a net increase of 110 or more daily vehicle trips.
- **Transportation Projects**
  - Likely to induce additional vehicle miles traveled (VMT) by increasing vehicle capacity.
  - Projects for which a transportation impact analysis is required by County ordinance, regulation, resolution, court order, or directive from the Board of Supervisors, Regional Planning Commission.

The transportation impact analysis will require the analyses and forecasting of impacts or deficiencies to the circulation system generated by the project. The transportation impact analysis will also identify feasible measures or corrective conditions to offset any impacts or deficiencies.

The county's process includes defining its Baseline VMT, developing VMT screening criteria, defining its impact thresholds, and determining potential mitigation strategies.

Defining the county's Baseline VMT is an important initial step in the implementation process because a VMT of the project will be compared to the county Baseline VMT to determine if the project exceeds the county's thresholds for VMT impacts. To determine the appropriate Baseline VMT for Los Angeles County, the VMT trends throughout the county and region were considered.

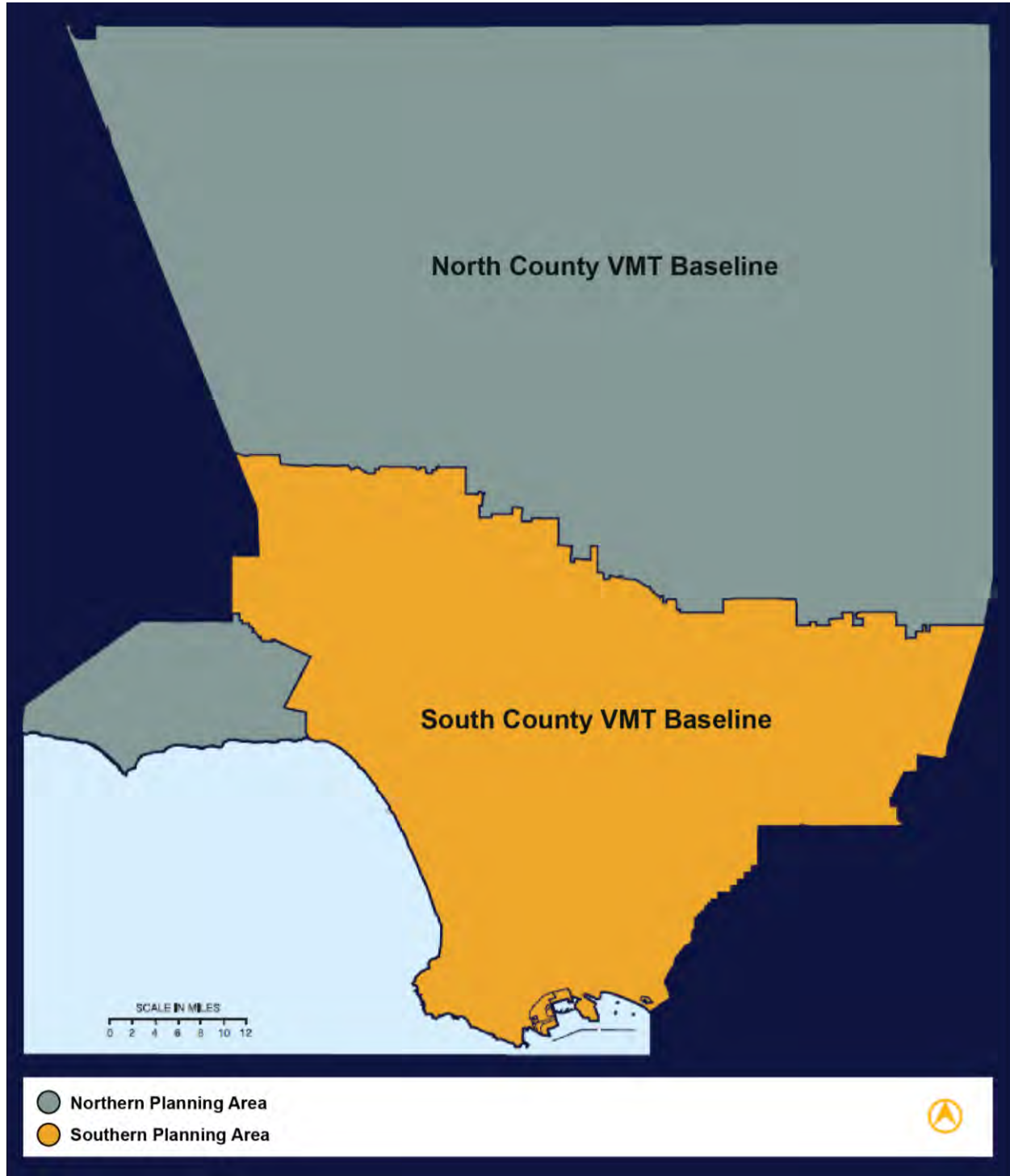
The regional Southern California Association of Governments (SCAG) model was determined to be the best available tool to estimate VMT in Los Angeles County. The most current version of the SCAG model, with a base year of 2012 and future year of 2040, was developed for the *2016 SCAG Regional Transportation Plan/ Sustainable Communities Strategy*, April 2016. The model utilizes traffic analysis zones (TAZs) that contain socio-economic data reflecting the population, employment, and land use development characteristics throughout the region.

## BASELINE VMT

Given the differences in VMT trends between the northern and southern planning areas in Los Angeles County, the County has adopted separate North County and South County Baseline VMT benchmarks. As shown in Figure 17, the North County Baseline VMT contains the Antelope Valley, Santa Clarita Valley, and Santa Monica Mountains planning areas in the more rural portion of the County and the South County Baseline VMT contains the remaining planning areas in the more urban portion of the County.

By establishing a North County and South County Baseline VMT, the County is acknowledging the differences in travel behavior in these areas given the land use context and transportation network to represent a more realistic and reasonable picture of VMT activity levels, and thus a more appropriate and feasible baseline for VMT analysis.

Figure 17: Baseline VMT Benchmark Coverage Area for Los Angeles County



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Table 30 reports the North County and South County Baseline VMT metrics for the county as reported in the *Transportation Impact Analysis Guidelines* document published by the Los Angeles County Public Works updated September 2, 2020. Future development projects and plans in each of these areas will be compared to the applicable Baseline VMT metrics to determine if they meet the County’s thresholds for a VMT impact. The higher North County Baseline VMT acknowledges that projects and plans in the northern portion of the county will generate higher levels of VMT and should be compared to current VMT trends when determining the significant findings for VMT impacts. The lower South County Baseline VMT holds projects and plans in the southern portion of the county to a more conservative standard than if it was compared to the average VMT for the overall county. However, projects and plans should be compared to current VMT trends in the southern portion of the county with similar land use context when determining if VMT impacts may occur.

**Table 30: Baseline VMT Thresholds for North and South County**

| Baseline Area | Total VMT per Service Population | Residential VMT per Capita | Employment VMT per Employee |
|---------------|----------------------------------|----------------------------|-----------------------------|
| North County  | 43.1                             | 22.3                       | 19.0                        |
| South County  | 31.1                             | 12.7                       | 18.4                        |

Source: *Transportation Impact Analysis Guidelines*, Los Angeles County Public Works, July 23, 2020

While the baseline VMT trends included in this table reflect the base year of the SCAG model, baseline conditions for CEQA purposes will be specific to the release date of a project’s notice of preparation. The Total VMT per Service Population threshold is independent of (and not necessarily a total of) Residential VMT per Capita and Employment per Employee.

The VMT methodology for land use projects and plans is based on the origin-destination (OD) VMT method. The OD VMT method estimates VMT generated by land uses in a specific geographic area such as the entire county, or a smaller area such as a regional planning area (e.g., Palmdale) or project site. All vehicles traveling to and from the defined geographic area are tracked within the SCAG model and the number of trips and length of trips are used to calculate the OD VMT. The OD VMT method requires two major data inputs. The first data input is the set of vehicle trip tables (including all vehicle trips by vehicle mode and by time of day) that contain the number of trips between each zone in the model. The second data input is the set of highway distance skims (by vehicle mode and by time of day) that allows the trip distances for each OD pair to be based on congested travel time, speed, and cost from the final highway assignment. The total VMT matrices are then generated by multiplying the final OD trip tables with the corresponding highway distance skims. This method of computing VMT is also referred to as zone-based.

For land use projects and plans, the OD VMT methodology is the most appropriate method because it tracks all trips by trip purpose and the full length of those trips generated by the proposed land uses. The methodology can be used to report the following VMT metric.

- **Total VMT per Service Population** (all vehicles and all trip purposes): The total VMT to and from all zones in the geographic area are divided by the total service population to establish the efficiency metric of VMT per service population. The total service population is the sum of the number residents and the number of employees.

## VMT THRESHOLDS FOR LAND USE PLANS

The Los Angeles County Transportation Impact Analysis Guidelines call for land use plans to promote outcomes whereby total VMT per service population (residents and employees) should be 16.8 percent below the existing VMT per service population for the Baseline Area in which the plan is located (see Table 30). Doing so will align the county with the latest state climate goals and help achieve its own targets. A 16.8 percent VMT reduction threshold also sets a higher bar than the suggested OPR threshold of 15 percent based on the latest research available. **At the time of the preparation of this document, the City of Palmdale is utilizing the LA County Guidelines for North County as the most appropriate VMT thresholds and analysis methodology.**

## VMT ANALYSIS

The Palmdale General Plan envisions a growth in population, households and employment to work toward a goal of being a self-contained community in the northern part of Los Angeles County, also known as Antelope Valley. The socio-economic data for the Palmdale sphere of influence, which includes the City of Palmdale and the surrounding areas, is reported in Table 31. The socio-economic data reported include population, households, employment and service population (which represents the sum of population and employment). A map of the area is displayed in Figure 18.

**Table 31: Palmdale Sphere of Influence Socio-economic Data**

|                    | 2017 SCAG* | 2017 Existing** | 2040 SCAG† | 2045 Base‡ | 2045 Preferred Plan§ |
|--------------------|------------|-----------------|------------|------------|----------------------|
| Population         | 195,574    | 188,488         | 248,031    | 240,515    | 225,692              |
| Households         | 56,863     | 53,626          | 75,925     | 72,840     | 70,618               |
| Employment         | 35,575     | 49,501          | 39,821     | 67,085     | 74,804               |
| Service Population | 231,149    | 237,989         | 287,852    | 307,600    | 300,496              |

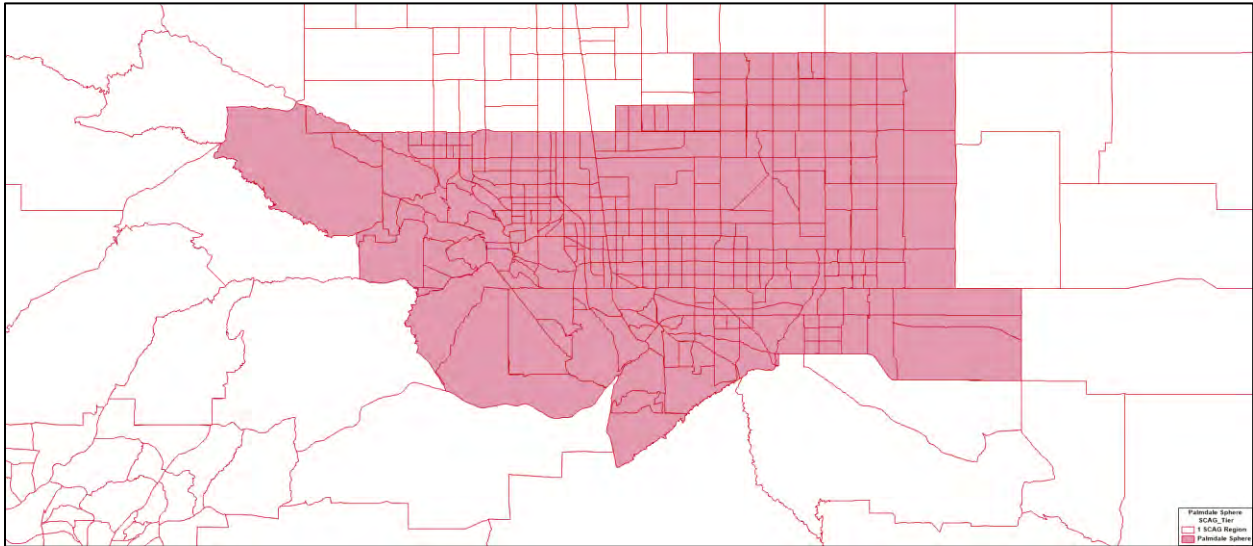
\*Based on the 2017 existing SCAG land use scenario and the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS).

\*\*Based on the 2017 SCAG with the City of Palmdale assumptions for households, population and employment and the SCAG 2016-2040 RTP/SCS. In addition, Plant 42 employment was added. The land use was updated for the Palmdale SOI zones only, all other zones contained the SCAG 2016-2040 RTP/SCS.

†Based on the 2040 SCAG land use scenario and the SCAG 2016-2040 RTP/SCS.

‡Based on the 2040 SCAG with the City of Palmdale assumptions for households, population and employment and the SCAG 2016-2040 RTP/SCS. In addition, Plant 42 employment was added. The land use was updated for the Palmdale SOI zones only, all other zones contained the SCAG 2016-2040 RTP/SCS.

§Based on the 2040 SCAG with the GP Preferred Plan assumptions for households, population and employment and SCAG 2016-2040. The land use was updated for the Palmdale SOI zones only, all other zones contained the SCAG 2016-2040 RTP/SCS.

**Figure 18: Palmdale Sphere of Influence**

The project impacts criterion, as defined by the Los Angeles SB 743 implementation guideline, states that all land use plans in the Los Angeles County area have certain VMT thresholds that must be met.

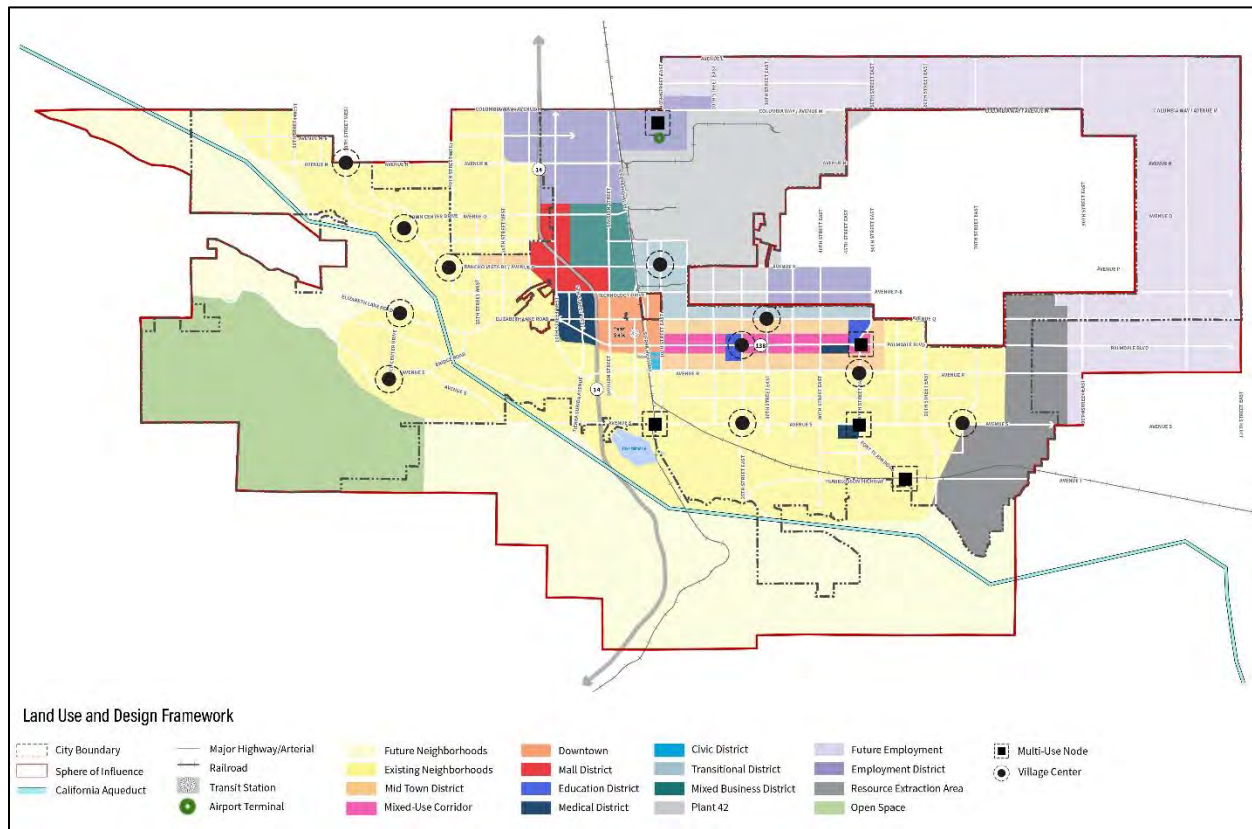
Palmdale is located in the North County region and as such the North County VMT criteria apply. The Baseline VMT threshold guidelines were presented previously in Table 30. The VMT screening procedure of the Palmdale General Plan Update (Palmdale GP) suggests that there are impacts because more than 110 trips are generated; therefore, a VMT impact criteria assessment is required for the Palmdale GP. The procedure compares the “Total VMT per Service Population” against the North County Baseline VMT scenario (see Table 30) for any impacts generated by the Palmdale GP.

The Palmdale General Plan preferred scenario (2045 Preferred Plan) is the future land use forecasting developed for future growth within the Palmdale city limits and its sphere of influence. The 2045 Preferred Plan was selected based on extensive review and feedback received of the scenarios by the Planning Commission, City Council, General Plan Advisory Committee, the community, and stakeholders. The major elements of the 2045 Preferred Plan, as shown in Figure 19, include:

- Two education districts
- Three health and wellness districts
- Regional commercial uses around the Antelope Valley Mall and a regional commercial area to the west of the intersection of Avenue Q/45<sup>th</sup> Street East
- A mix of employment uses around Plant 42
- Mixed uses along the Palmdale Boulevard corridor
- Medium density housing north and south of Palmdale Boulevard
- Village Centers with a mix of neighborhood retail or commercial uses along with residential uses in mixed-use format in various locations throughout the city.



Figure 19. 2045 Preferred Plan Land Use and Design Framework



The SCAG RTP/SCS Travel Demand Model (SCAG model) was run through all four steps of the SCAG model for the following scenarios:

- **2017 SCAG:** This model run is based on the 2017 model forecast year assumptions using the 2016 RTP/SCS model directly without any modifications.
- **2017 Existing:** The 2017 SCAG model forecast year is used and the land use in the Palmdale SOI is modified with land use obtained from the City of Palmdale. The employment is updated for several zones to account for Plant 42, which is not in the employment forecasts.
- **2040 SCAG:** This model run is based on the 2040 model forecast year assumptions using the 2016 RTP/SCS model directly without any modifications.
- **2045 Base:** The 2040 SCAG model forecast year is used and the land use in the Palmdale City limits were modified to reflect updated assumptions. The 2045 Base scenario is developed by updating the 2040 SCAG land use within the Palmdale SOI with land use obtained from the City of Palmdale. The employment is updated for a few zones to account for Plant 42, which was not in the employment forecasts. The land use updates are made to all the zones within the Palmdale SOI to reflect updated socioeconomic data forecasts.
- **2045 Preferred Plan:** The 2040 SCAG model forecast year is used and the land use in the Palmdale City limits are modified to reflect the final 2045 Preferred Plan scenario assumptions. The 2045 Preferred Plan scenario are updated with revised socioeconomic data forecasts which are conservative in nature. Land use updates are made to all the zones within the Palmdale SOI to reflect updated socioeconomic data forecasts.

**Traffic Report**

The SCAG zone system is refined for the Palmdale sphere of influence only to perform traffic assignments after the original SCAG model is run through the complete SCAG model (four steps) for each of the scenarios. The expanded zone system in the Palmdale sphere of influence is used for traffic assignment purposes to better reflect the ground conditions in the study area as the original SCAG zones are too large.

The VMT generated by the Palmdale sphere of Influence encompasses the city of Palmdale for which the land use plan is being developed. The geographic area covered by the Palmdale sphere of influence includes the city of Palmdale and the surrounding areas as shown previously in Figure 2. The VMT generated by trips between the Palmdale sphere of influence and other areas of the SCAG region is computed for all trips from and to the Palmdale SOI. The VMT threshold results of the various scenarios are shown in Table 32, which compares the Baseline VMT threshold criteria for the North County region. The Palmdale GP scenarios are well below the North County targets of 35.9, which is a 16.8 percent reduction from the baseline VMT. The Palmdale GP scenarios effectively reduce the total VMT per service population by more than double the required reduction needed. VMT per service population is the only metric or impact criteria required for a land use plan such as the Palmdale General Plan, as reported in Section 3.1.3—Impact Criteria of the *Transportation Impact Analysis Guidelines* document published by the Los Angeles County Public Works (July 23, 2020). The 2045 Preferred Plan has the least significant impact of all the scenarios, where the socio-economic data were evaluated and placed in the optimum locations for smart growth considerations. Therefore, there is no VMT impact from the 2045 Preferred Plan and as such, no mitigations are necessary.

**Table 32: Baseline VMT Thresholds—Total VMT per Service Population**

|   | 2017 SCAG | 2017 Existing | 2040 SCAG | 2045 Base | 2045 Preferred Plan |
|---|-----------|---------------|-----------|-----------|---------------------|
| Total VMT for service population from the model scenarios * | 35.4      | 34.3          | 32.5      | 30.6      | 27.0                |
| VMT impact criteria threshold result                        | Pass      | Pass          | Pass      | Pass      | Pass                |

Note: North County baseline VMT for total service population is 43.1 as shown in Table 31.

\*A 16.8% decrease from the baseline VMT amounts to 35.9 as recommended by the Los Angeles County Public Works *Transportation Impact Analysis Guidelines*.

In addition, other metrics are reported against the Baseline North County targets as shown in Table 32 below for home-based work and all home-based trips. All home-based trips are trips that originate at home; home-based work trips originate at home and end at a workplace. These metrics are not required for land use plans such as the Palmdale General Plan as they are primarily required for project specific VMT impacts. Table 33 shows the home-based VMT comparisons, where the employment VMT per employee is very similar to the North County Baseline target for the 2045 Preferred Plan scenario. The residential VMT per capita is, however, significantly lower than the baseline target and effectively reduces the overall VMT for home-based trips that includes all residents, which in turn reduces emissions.



**Table 33: Baseline VMT Thresholds—Home-based Trips**

| North County Target          | Target | 2017 Existing | 2045 Base | 2045 Preferred Plan |
|------------------------------|--------|---------------|-----------|---------------------|
| Employment VMT per employee* | 19.00  | 13.37         | 11.48     | 19.65               |
| Residential VMT per capita** | 22.30  | 26.19         | 23.20     | 16.57               |

\*Employment VMT is the VMT generated by home-based work trip attractions

\*\*Residential VMT is the VMT generated by home-based work and home-based other trip productions.

Note: These metrics are not required for land use plans such as the Palmdale General Plan and are presented for information purposes only.

Table 34 presents the various statistics for the resident home-based trips with origins (productions) in the Palmdale SOI for all the scenarios. The average trip lengths for home-based work and all home-based trips decrease in the 2045 scenarios, which in turn reduces the VMT generated. The resident VMT per capita and the resident VMT per employee also decrease. All these reductions effectively contribute to the overall reduction in VMT and thereby improve the air quality by reducing the emissions of greenhouse gases and CO<sub>2</sub>.

**Table 34: Home-based Trips and VMT Statistics**

|                                     | 2017 Existing | 2045 Base | 2045 Preferred Plan |
|-------------------------------------|---------------|-----------|---------------------|
| Palmdale sphere - population        | 188,488       | 240,515   | 225,692             |
| Palmdale sphere - households        | 53,626        | 72,840    | 70,618              |
| Palmdale sphere - employment        | 49,501        | 67,085    | 74,804              |
| Home-based work trips - productions | 98,084        | 112,477   | 92,503              |
| Home-based work VMT - productions   | 3,096,569     | 3,497,945 | 1,997,333           |
| Home-based work trips - attractions | 59,460        | 76,521    | 108,228             |
| Home-based work VMT - attractions   | 661,869       | 770,230   | 1,469,886           |
| Home-based work trips per capita    | 0.52          | 0.47      | 0.41                |
| Home-based work trips per employee* | 1.20          | 1.14      | 1.45                |
| Home-based work VMT per capita      | 16.43         | 14.54     | 8.85                |
| Home-based work VMT per employee*   | 13.37         | 11.48     | 19.65               |
| Home-based work - trip length       | 31.57         | 31.10     | 21.59               |
| Home-based all trips - productions  | 299,413       | 357,163   | 296,393             |
| Home-based all VMT - productions    | 4,936,083     | 5,580,844 | 3,740,763           |
| Home-based all trips - attractions  | 247,409       | 320,037   | 308,625             |
| Home-based all VMT - attractions    | 2,040,790     | 2,543,397 | 2,874,992           |
| Home-based all trips per capita     | 1.59          | 1.48      | 1.31                |
| Home-based all trips per employee*  | 5.00          | 4.77      | 4.13                |
| Home-based all VMT per capita       | 26.19         | 23.20     | 16.57               |
| Home-based all VMT per employee*    | 41.23         | 37.91     | 38.43               |
| Home-based all trips – trip length  | 16.49         | 15.63     | 12.62               |

\*This computation uses attractions

**Traffic Report**

Table 35 shows that the average trip length for all trip purposes also decreases, thereby reducing VMT and contributing to the reduction of greenhouse gases. The zone-based VMT computations are computed by using a highway skim matrix for travel-time and travel-distances along with the trip table matrices. This procedure involves matrix computations, where the skim matrices are derived from a valid traffic assignment. The results of these computations are summarized only for the zones in the Palmdale SOI. Note that the VMT generated by this process (skim-based) will be slightly different from the VMT generated by a link-based process. The VMT reported in Table 35 is used for computing the total VMT per service population.

**Table 35: All Trips and VMT Statistics**

| All Trip Purposes—Palmdale Sphere    | 2017 Existing | 2045 Base    | 2045 Preferred Plan |
|--------------------------------------|---------------|--------------|---------------------|
| Total service population             | 237,989       | 307,600      | 300,496             |
| VMT (zone-based)                     | 8,153,876     | 9,424,251    | 8,111,684           |
| Total trips per capita               | 2.70          | 2.52         | 2.50                |
| Total trips per employee             | 10.30         | 9.04         | 7.54                |
| Total VMT per service population     | 34.30         | 30.60        | 27.00               |
| <b>All trips—average trip length</b> | <b>11.87</b>  | <b>11.56</b> | <b>10.86</b>        |

## VMT MITIGATION OPPORTUNITIES

Although no mitigations are required for the 2045 Preferred Plan, it is useful to understand the mitigation strategies that may be applied in the future, if needed, to reduce the VMT through mitigation measures. The types of mitigation that affect VMT are those that reduce the number of single-occupant vehicles generated. This can be accomplished by modifying the proposed land uses or by implementing transportation demand management (TDM) strategies. Transportation demand management strategies are reductions to trip generation based on certain types of project site modifications, programming, and operational changes (see Table 36 for examples of TDM strategies).

Research documented in the 2010 California Air Pollution Control Officers Association (CAPCOA) publication, *Quantifying Greenhouse Gas Mitigation Measures*, offers TDM methodologies based on preferred literature, along with methodology based on alternative literature, to estimate the effectiveness of each strategy<sup>2</sup>.

As part of the environmental process, specific mitigation strategies must be tailored to the characteristics of the project area followed by analysis and documentation of the effectiveness of the mitigation strategies to determine if those strategies will adequately mitigate impacts or if impacts will remain significant and unavoidable. Given that research on TDM strategies is on-going, feasible mitigation measures must be considered based on the best data available at the time.

The strategies described below in Table 36 are examples of the mitigation options that are most effective in areas comparable to Palmdale. Many of these strategies have already been implemented.

<sup>2</sup> California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, August 2010  
<http://www.capcoa.org/wp-content/uploads/downloads/2010/09/CAPCOA-Quantification-Report-9-14-Final.pdf>.

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**Table 36: VMT Reduction Strategies**

| Strategy   | Description   | VMT Benefit   | Range of CAPCOA VMT Reductions                     |
|--|---|---|--|
| Increase diversity of developments (mixed use)                               | Includes mixed uses within Projects or in consideration of surrounding area.  | Minimizes number and length of vehicle trips.   | 9 to 30%   |
| Provide pedestrian network improvements                                      | Creates pedestrian network within projects and connects to nearby destinations. Could also occur through impact fee program for active transportation improvements.   | Encourages people to walk within and to project.  | 0 to 2%  |
| Provide traffic calming measures and low-stress bicycle network improvements | Creates networks with low vehicle speeds and volumes that support walking and bicycling. Could also occur through impact fee program for active transportation improvements.  | Encourages people to bicycle, especially for shorter trips.   | 0.25 to 1%   |
| Implement car-sharing and ride-sharing programs                              | Shared fleet of vehicles accessible on-site for residents or employees. Can serve as a first/last-mile solution to connect with transit.  | Reduces the need to own a vehicle or the number of household vehicles.  | Car-Sharing: 0.4 to 0.7%<br>Ride-Sharing: 1 to 15% |
| Encourage telecommuting and alternative work schedules                       | Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees.<br>Alternative work schedules could take the form of staggered start times, flexible schedules, or compressed work weeks.   | Reduces the number of days employees need to work and/or shifts commute time outside of peak periods to avoid adding to congestion. | 0.07 to 5.5%                                       |
| Commute Trip Reduction Programs  | Projects can implement a voluntary Commute Trip Reduction program with employers to discourage single-occupancy vehicle trips and encourage alternative modes of transportation.<br>Alternatively, a jurisdiction can implement a Commute Trip Reduction Ordinance with the intent of reducing drive-alone travel mode share. | Encourages alternatives to commuting in single-occupancy vehicles.  | Varies based on selected programs                  |
| Limited Parking Supply   | Projects can change parking requirements and types of supply within the Project site to encourage “smart growth” development and alternative transportation choices by project residents and employees.   | Encourages alternatives to the use of single-occupancy vehicles.  | 5% - 12.5%   |
| Unbundle Parking Costs from Property Cost                                    | Unbundling separates parking from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost.  | Encourages alternatives to the use of single-occupancy vehicles.  | 2.6% - 13%   |

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Table 37 presents the percent share of VMT generated by trips between the Palmdale sphere of influence and other areas of the SCAG region. The intra-Palmdale VMT increased in the 2045 Preferred Plan scenario, reducing VMT to other areas using smart growth assumptions (e.g., a good mixture of households and employment and transit-oriented developments). Palmdale has been an exporter of workers, but now finds itself being less of an exporter with smart growth initiatives and striving toward being self-contained as evident by the reduction to VMT to other regions and the increase in VMT to the Palmdale sphere of influence and neighboring areas (e.g., Lancaster and the High Desert Region). The VMT to other parts of Los Angeles and Orange counties dropped from 49 to 36 percent, a decrease of 13 percent, primarily due to the reduced number of longer trips.

**Table 37: VMT between Palmdale Sphere and Areas within the SCAG Region**

| Percent Share of VMT   | 2017 SCAG   | 2017 Existing | 2040 SCAG   | 2045 Base   | 2045 Preferred Plan |
|--|-------------|---------------|-------------|-------------|---------------------|
| Within Palmdale sphere   | 12.7%       | 14.4%         | 12.7%       | 15.9%       | 16.9%               |
| Within Palmdale/Lancaster/High Desert region   | 30.9%       | 33.4%         | 29.8%       | 34.4%       | 38.3%               |
| Between Palmdale and LA County/Orange County   | 48.9%       | 45.9%         | 46.4%       | 41.9%       | 35.6%               |
| Between Palmdale and remainder of SCAG region and external trips from outside the region | 20.2%       | 20.7%         | 23.8%       | 23.8%       | 26.1%               |
| <b>Total</b>   | <b>100%</b> | <b>100%</b>   | <b>100%</b> | <b>100%</b> | <b>100%</b>         |

Table 38 displays the link-based daily VMT generated by the SCAG model for the different facility types having an origin or destination in the Palmdale sphere of influence. Trips which are pass-through in nature, where they do not have an origin or destination in the Palmdale SOI are not counted. The link-based VMT computations are computed by selecting all the zones in the Palmdale SOI and performing a “Select Zones” traffic assignment procedure.

**Table 38: VMT to/from Palmdale Sphere to Areas within the SCAG Region by Facility Type**

| Facility Type       | 2017 SCAG        | 2017 Existing    | 2040 SCAG        | 2045 Base        | 2045 Preferred Plan |
|---------------------|------------------|------------------|------------------|------------------|---------------------|
| Freeways            | 2,991,484        | 2,893,868        | 3,069,614        | 2,945,756        | 2,395,390           |
| HOT facilities      | 11,995           | 11,431           | 10,255           | 9,285            | 7,911               |
| HOV facilities      | 310,128          | 284,701          | 330,265          | 284,422          | 184,453             |
| Expressway/parkway  | 3,940            | 4,381            | 4,855            | 5,650            | 5,083               |
| Principal arterials | 1,436,595        | 1,484,072        | 1,539,496        | 1,671,644        | 1,571,929           |
| Minor arterials     | 1,566,404        | 1,631,560        | 1,744,660        | 1,897,218        | 1,821,834           |
| Major collectors    | 1,101,524        | 1,067,379        | 1,343,539        | 1,321,027        | 1,075,565           |
| Minor collectors    | 40,011           | 41,916           | 38,246           | 43,307           | 53,726              |
| Freeway ramps       | 156,721          | 152,550          | 162,438          | 156,041          | 122,764             |
| Truck lanes only    | 4,456            | 6,323            | 4,427            | 7,485            | 8,130               |
| Centroid connectors | 423,875          | 450,545          | 453,483          | 520,432          | 480,325             |
| <b>Total</b>        | <b>8,047,133</b> | <b>8,028,726</b> | <b>8,701,278</b> | <b>8,862,268</b> | <b>7,727,110</b>    |

Table 39 shows the link-based daily VMT including all trips generated by the SCAG model regardless of whether the trip begins or ends within the Palmdale sphere of influence. The 2045 Preferred Plan scenario is lower than the adopted 2040 SCAG RTP/SCS forecasts for both the SCAG region and the Palmdale sphere of influence. All trips using the highway network within the Palmdale SOI are counted.

**Table 39: VMT for All Links within the Geographic Area**

| All Trips Generated within or Passing through Palmdale Sphere (II, IX-XI and XX)* | 2017 SCAG   | 2017 Existing | 2040 SCAG   | 2045 Base   | 2045 Preferred Plan |
|---|-------------|---------------|-------------|-------------|---------------------|
| SCAG region-daily VMT   | 467,745,693 | 467,270,822   | 537,732,813 | 537,063,042 | 535,079,227         |
| Palmdale sphere-daily VMT   | 4,196,206   | 4,275,553     | 4,798,099   | 5,029,773   | 4,685,219           |

\*II = Internal-to-internal trips, where both ends of the trips are within the Palmdale SOI

IX = Internal-to-external trips, where the origin of the trips is within the Palmdale SOI and the destination of the trips could be anywhere in the SCAG region.

XI = External-to-internal trips, where the origin of the trips could be anywhere in the SCAG region and the destination of the trips is within the Palmdale SOI

XX = External-to-external trips, where both the origin and destination of the trips is anywhere in the SCAG region

## Conclusion

It can be seen from Table 32 that the Palmdale General Plan scenarios are well within the acceptable VMT thresholds for land use plans in the North County region as the decrease in total VMT per service population is more than double the required reduction needed. The 2045 Preferred Plan has the lowest total VMT per service population among the scenarios with a reduction of more than 37 percent compared to the Baseline VMT for North County. As such, the 2045 Preferred Plan does not require mitigations.

The average overall trip length for all trip purposes decreases in the 2045 Preferred Plan scenario, in turn reducing the VMT generated. The home-based work VMT per capita and the home-based all VMT per capita also decreases. In addition, the average trip length for home-based work and home-based all trip purposes decreases in the 2045 Preferred Plan scenario, which in turn reduces the total amount of VMT generated. All these reductions in the amount of VMT generated effectively contribute toward improved air quality and thereby reduce the emissions of greenhouse gases and CO<sub>2</sub>.

# **APPENDIX**

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Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|-----|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|     | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 288 | 1273.0        | 582.0      | 82.5       | 1866.4     | 874.7      | 86.9       | 0.0                 | 0.0        | 0.0        |
| 325 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 40.7       |
| 331 | 3.7           | 1.3        | 6.5        | 4.3        | 1.4        | 7.5        | 4.3                 | 1.4        | 7.5        |
| 333 | 8.6           | 2.8        | 8.7        | 9.9        | 3.0        | 10.9       | 9.9                 | 3.0        | 10.9       |
| 335 | 43.5          | 27.6       | 0.0        | 25.6       | 11.7       | 0.0        | 25.6                | 11.7       | 0.0        |
| 350 | 10.0          | 7.0        | 5.0        | 9.4        | 7.0        | 5.0        | 2035.0              | 740.0      | 137.0      |
| 352 | 1377.0        | 775.0      | 210.0      | 1627.7     | 976.0      | 358.0      | 2575.6              | 783.7      | 215.0      |
| 353 | 1210.8        | 418.6      | 140.9      | 1558.0     | 576.7      | 141.8      | 1558.0              | 576.7      | 141.8      |
| 354 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 8.2                 | 2.8        | 0.0        |
| 355 | 1564.0        | 428.0      | 49.0       | 2051.1     | 598.0      | 71.0       | 2101.7              | 620.6      | 33.5       |
| 356 | 973.0         | 273.2      | 27.5       | 1226.6     | 354.1      | 29.3       | 1226.6              | 354.1      | 29.3       |
| 357 | 3602.0        | 1348.0     | 685.0      | 4424.0     | 1627.0     | 703.0      | 22.4                | 6.5        | 0.0        |
| 358 | 0.0           | 0.0        | 18.6       | 0.0        | 0.0        | 22.1       | 0.0                 | 0.0        | 0.0        |
| 359 | 365.0         | 126.1      | 15.4       | 424.8      | 151.6      | 16.7       | 424.8               | 151.6      | 16.7       |
| 360 | 727.0         | 248.9      | 57.8       | 959.5      | 341.0      | 59.7       | 755.2               | 220.2      | 92.0       |
| 361 | 0.0           | 0.0        | 3174.2     | 0.0        | 0.0        | 4472.4     | 1735.3              | 684.5      | 2303.0     |
| 362 | 2355.0        | 703.0      | 489.0      | 3660.0     | 1164.0     | 569.0      | 2873.1              | 830.5      | 472.3      |
| 363 | 507.3         | 188.5      | 53.8       | 537.5      | 178.9      | 62.6       | 328.2               | 95.3       | 0.0        |
| 364 | 0.0           | 0.0        | 242.4      | 0.0        | 0.0        | 1159.2     | 0.0                 | 0.0        | 2461.5     |
| 365 | 1577.0        | 659.0      | 2851.0     | 2165.3     | 964.0      | 3145.0     | 2496.0              | 721.5      | 2949.0     |
| 366 | 2.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 628.6      |
| 367 | 0.0           | 0.0        | 181.0      | 0.0        | 0.0        | 202.0      | 27.5                | 8.0        | 203.2      |
| 368 | 1498.0        | 360.0      | 30.0       | 2191.1     | 561.0      | 32.0       | 1309.7              | 380.1      | 4.2        |
| 369 | 939.0         | 325.0      | 816.0      | 1423.7     | 525.0      | 931.0      | 1174.7              | 446.5      | 766.0      |
| 370 | 49.9          | 13.7       | 188.2      | 49.9       | 14.5       | 205.8      | 799.4               | 293.7      | 188.0      |
| 371 | 1321.0        | 417.0      | 1135.0     | 2242.0     | 754.0      | 1270.0     | 1608.2              | 528.4      | 1069.1     |
| 372 | 1877.0        | 1084.0     | 126.0      | 3258.7     | 2005.0     | 126.0      | 3775.7              | 1194.5     | 76.5       |
| 374 | 2399.0        | 683.0      | 29.0       | 2891.3     | 877.0      | 328.0      | 2194.5              | 685.1      | 9.0        |
| 375 | 0.0           | 0.0        | 142.8      | 0.0        | 0.0        | 229.0      | 0.0                 | 0.0        | 4743.7     |
| 376 | 521.7         | 207.4      | 580.4      | 729.9      | 309.1      | 655.0      | 545.3               | 205.9      | 491.9      |
| 377 | 1551.0        | 371.0      | 394.0      | 2354.4     | 600.0      | 459.0      | 1533.2              | 456.4      | 346.1      |
| 378 | 216.5         | 101.2      | 8.9        | 220.9      | 94.9       | 9.9        | 0.0                 | 0.0        | 0.0        |
| 379 | 6707.0        | 1774.0     | 265.0      | 7611.9     | 2145.0     | 394.0      | 6222.8              | 1839.8     | 259.4      |
| 380 | 3008.0        | 705.0      | 67.0       | 3023.6     | 755.0      | 106.0      | 2339.6              | 713.5      | 53.0       |

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Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 381  | 800.4         | 173.3      | 241.3      | 963.1      | 222.1      | 286.4      | 2019.4              | 686.6      | 360.0      |
| 382  | 1367.8        | 333.0      | 200.2      | 2738.5     | 710.4      | 305.5      | 1236.5              | 362.3      | 383.9      |
| 383  | 0.0           | 0.0        | 7.0        | 0.0        | 0.0        | 19.0       | 0.0                 | 0.0        | 0.0        |
| 384  | 0.0           | 0.0        | 2.1        | 0.0        | 0.0        | 2.6        | 0.0                 | 0.0        | 2.6        |
| 385  | 1831.0        | 420.0      | 488.0      | 2614.7     | 639.0      | 509.0      | 4160.9              | 1540.1     | 929.0      |
| 386  | 1138.5        | 230.0      | 28.5       | 1639.1     | 352.8      | 32.5       | 1073.5              | 310.3      | 20.0       |
| 387  | 1.0           | 1.0        | 30.2       | 1.3        | 1.3        | 31.3       | 9.6                 | 2.8        | 30.0       |
| 388  | 259.7         | 78.6       | 30.7       | 312.3      | 98.8       | 30.6       | 312.3               | 98.8       | 30.6       |
| 389  | 303.5         | 59.8       | 34.1       | 361.6      | 74.3       | 33.6       | 361.6               | 74.3       | 33.6       |
| 390  | 307.5         | 101.1      | 22.1       | 316.8      | 83.2       | 99.4       | 316.8               | 83.2       | 99.4       |
| 393  | 57.8          | 29.7       | 5.7        | 64.5       | 29.8       | 6.4        | 64.5                | 29.8       | 6.4        |
| 4193 | 0.0           | 0.0        | 4.4        | 0.0        | 0.0        | 4.6        | 0.0                 | 0.0        | 4.6        |
| 4194 | 0.0           | 0.0        | 0.9        | 0.0        | 0.0        | 0.9        | 0.0                 | 0.0        | 0.0        |
| 4195 | 0.0           | 0.0        | 7.2        | 0.0        | 0.0        | 7.6        | 0.0                 | 0.0        | 0.0        |
| 4196 | 583.0         | 172.0      | 105.0      | 1409.4     | 443.0      | 107.0      | 1061.0              | 307.1      | 106.2      |
| 4197 | 845.4         | 245.8      | 21.0       | 1160.7     | 359.5      | 26.5       | 1120.0              | 323.8      | 20.0       |
| 4198 | 515.6         | 156.2      | 21.0       | 707.8      | 228.5      | 26.5       | 544.0               | 157.3      | 64.9       |
| 4199 | 625.0         | 198.0      | 26.0       | 1149.6     | 388.0      | 63.0       | 730.4               | 211.1      | 19.0       |
| 4200 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4201 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 247.6      |
| 4202 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4203 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4204 | 38.0          | 11.0       | 0.0        | 61.6       | 19.0       | 0.0        | 38.4                | 11.1       | 0.0        |
| 4205 | 22.0          | 2.6        | 3.2        | 25.6       | 2.9        | 3.7        | 25.6                | 2.9        | 3.7        |
| 4206 | 18.3          | 5.1        | 3.2        | 21.3       | 5.8        | 3.7        | 21.3                | 5.8        | 3.7        |
| 4207 | 11.0          | 7.0        | 0.0        | 10.3       | 7.0        | 0.0        | 25.6                | 7.4        | 0.0        |
| 4208 | 7.4           | 1.4        | 7.8        | 8.5        | 1.5        | 9.7        | 8.5                 | 1.5        | 9.7        |
| 4209 | 3.7           | 1.4        | 8.2        | 4.2        | 1.5        | 10.1       | 4.2                 | 1.5        | 10.1       |
| 4210 | 70.1          | 30.4       | 8.3        | 80.7       | 32.8       | 10.4       | 80.7                | 32.8       | 10.4       |
| 4211 | 1.2           | 1.4        | 8.1        | 1.4        | 1.5        | 10.1       | 1.4                 | 1.5        | 10.1       |
| 4212 | 12.3          | 2.8        | 8.3        | 14.2       | 3.0        | 10.3       | 14.2                | 3.0        | 10.3       |
| 4213 | 9.8           | 2.8        | 8.2        | 11.3       | 3.0        | 10.2       | 11.3                | 3.0        | 10.2       |
| 4214 | 4.9           | 1.4        | 4.3        | 5.7        | 1.5        | 5.3        | 5.7                 | 1.5        | 5.3        |
| 4215 | 52.9          | 24.8       | 4.1        | 60.9       | 26.8       | 5.0        | 60.9                | 26.8       | 5.0        |



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| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4216 | 14.0          | 3.0        | 0.0        | 13.1       | 3.0        | 0.0        | 12.8                | 3.7        | 0.0        |
| 4217 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4218 | 6.0           | 2.0        | 0.0        | 5.6        | 2.0        | 0.0        | 6.4                 | 1.9        | 0.0        |
| 4219 | 1.0           | 1.0        | 0.0        | 0.9        | 1.0        | 0.0        | 3.2                 | 0.9        | 0.0        |
| 4220 | 61.8          | 19.7       | 0.0        | 36.4       | 8.4        | 0.0        | 36.4                | 8.4        | 0.0        |
| 4221 | 45.8          | 23.7       | 0.0        | 27.0       | 10.1       | 0.0        | 27.0                | 10.1       | 0.0        |
| 4222 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4223 | 1.5           | 0.5        | 0.0        | 2.8        | 1.0        | 0.0        | 0.9                 | 0.2        | 0.0        |
| 4224 | 1.5           | 0.5        | 0.0        | 2.8        | 1.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4225 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4226 | 2.0           | 1.0        | 0.0        | 1.9        | 1.0        | 0.0        | 3.2                 | 0.9        | 0.0        |
| 4227 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4228 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4229 | 1.0           | 1.0        | 0.0        | 0.9        | 1.0        | 0.0        | 2901.5              | 925.0      | 0.0        |
| 4230 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4231 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4232 | 0.0           | 0.0        | 1.8        | 0.0        | 0.0        | 1.8        | 0.0                 | 0.0        | 0.0        |
| 4233 | 0.0           | 0.0        | 2.2        | 0.0        | 0.0        | 2.2        | 0.0                 | 0.0        | 0.0        |
| 4234 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4235 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4236 | 77.0          | 26.0       | 3.0        | 98.9       | 35.2       | 4.5        | 3.2                 | 0.9        | 0.0        |
| 4237 | 2097.0        | 592.0      | 323.0      | 2181.1     | 656.0      | 328.0      | 1848.0              | 592.0      | 360.0      |
| 4238 | 1410.0        | 608.0      | 32.0       | 1549.8     | 712.0      | 44.0       | 1583.0              | 608.7      | 33.0       |
| 4239 | 683.5         | 258.4      | 141.2      | 879.5      | 355.9      | 142.1      | 879.5               | 355.9      | 142.1      |
| 4240 | 874.7         | 332.0      | 140.9      | 1125.5     | 457.3      | 141.8      | 1125.5              | 457.3      | 141.8      |
| 4241 | 99.3          | 27.2       | 5.1        | 126.7      | 37.0       | 5.1        | 127.7               | 37.4       | 5.1        |
| 4242 | 128.8         | 43.9       | 10.4       | 164.3      | 59.7       | 10.4       | 165.7               | 60.4       | 10.5       |
| 4243 | 60.0          | 17.9       | 5.5        | 76.5       | 24.4       | 5.5        | 331.4               | 95.8       | 44.0       |
| 4244 | 1107.0        | 346.0      | 26.0       | 1147.2     | 382.0      | 26.0       | 1184.1              | 346.0      | 12.0       |
| 4245 | 6.0           | 2.0        | 0.0        | 5.6        | 2.0        | 0.0        | 3.6                 | 1.1        | 0.0        |
| 4246 | 5.0           | 3.0        | 0.0        | 4.7        | 3.0        | 0.0        | 1385.2              | 408.0      | 52.3       |
| 4247 | 843.0         | 209.0      | 9.0        | 829.1      | 219.0      | 10.0       | 720.0               | 208.1      | 22.0       |
| 4248 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4249 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |

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Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4250 | 1993.0        | 550.0      | 111.2      | 2027.1     | 596.0      | 114.0      | 2265.6              | 654.9      | 88.0       |
| 4251 | 0.0           | 0.0        | 48.8       | 0.0        | 0.0        | 50.0       | 0.0                 | 0.0        | 50.0       |
| 4252 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 6400.0              | 1850.0     | 120.0      |
| 4253 | 1375.0        | 349.0      | 13.0       | 1368.3     | 370.0      | 15.0       | 1920.0              | 555.0      | 0.0        |
| 4254 | 3501.2        | 940.7      | 300.4      | 3456.4     | 989.4      | 430.0      | 3264.0              | 943.5      | 303.0      |
| 4255 | 4541.8        | 1300.3     | 297.6      | 4483.7     | 1367.6     | 426.0      | 4437.4              | 1300.3     | 342.0      |
| 4256 | 1160.0        | 359.0      | 497.0      | 1116.1     | 368.0      | 545.0      | 1237.7              | 358.8      | 515.0      |
| 4257 | 1819.0        | 511.0      | 34.0       | 2245.3     | 672.0      | 51.0       | 1856.0              | 536.5      | 31.0       |
| 4258 | 892.4         | 250.5      | 13.7       | 1125.1     | 324.7      | 14.6       | 1125.1              | 324.7      | 14.6       |
| 4259 | 186.5         | 57.2       | 6.6        | 235.2      | 74.2       | 7.0        | 144.0               | 41.6       | 0.0        |
| 4260 | 319.0         | 108.0      | 13.3       | 402.2      | 140.0      | 14.2       | 307.6               | 89.7       | 16.0       |
| 4261 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 16.0                | 4.6        | 0.0        |
| 4262 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4263 | 0.0           | 0.0        | 18.4       | 0.0        | 0.0        | 21.9       | 165.3               | 59.7       | 43.3       |
| 4264 | 897.0         | 243.0      | 30.0       | 928.6      | 268.0      | 31.0       | 905.6               | 261.8      | 30.0       |
| 4265 | 1306.0        | 308.0      | 33.0       | 1329.3     | 334.0      | 35.0       | 1129.6              | 326.5      | 16.0       |
| 4266 | 845.0         | 195.0      | 7.0        | 1448.0     | 356.0      | 7.0        | 1052.8              | 304.3      | 33.0       |
| 4267 | 794.2         | 190.7      | 38.2       | 959.8      | 245.6      | 38.7       | 656.0               | 189.6      | 30.0       |
| 4268 | 921.8         | 261.3      | 35.8       | 1114.1     | 336.4      | 36.3       | 1001.6              | 289.5      | 30.0       |
| 4269 | 350.0         | 98.0       | 323.0      | 600.0      | 179.0      | 325.0      | 342.4               | 99.0       | 327.0      |
| 4270 | 1084.0        | 308.0      | 27.0       | 1542.7     | 467.0      | 28.0       | 1057.8              | 309.9      | 0.0        |
| 4271 | 248.0         | 90.7       | 7.6        | 288.6      | 109.0      | 8.3        | 288.6               | 109.0      | 8.3        |
| 4272 | 115.9         | 45.4       | 2.9        | 134.9      | 54.5       | 3.2        | 134.9               | 54.5       | 3.2        |
| 4273 | 1.0           | 1.1        | 200.1      | 3.8        | 4.3        | 257.2      | 105.8               | 30.6       | 907.3      |
| 4274 | 1.0           | 0.9        | 97.9       | 3.7        | 3.7        | 125.8      | 75.6                | 22.3       | 99.2       |
| 4275 | 405.8         | 122.8      | 15.3       | 472.3      | 147.6      | 16.6       | 346.0               | 100.8      | 32.0       |
| 4276 | 178.2         | 71.9       | 7.6        | 207.4      | 86.4       | 8.2        | 193.8               | 56.4       | 5.0        |
| 4277 | 163.2         | 58.6       | 7.6        | 189.9      | 70.5       | 8.3        | 166.4               | 48.1       | 25.0       |
| 4278 | 182.5         | 52.0       | 7.7        | 212.4      | 62.5       | 8.3        | 147.2               | 42.6       | 1.0        |
| 4279 | 201.8         | 68.6       | 7.5        | 234.9      | 82.4       | 8.2        | 187.4               | 54.6       | 1.0        |
| 4280 | 96.6          | 33.2       | 3.7        | 112.4      | 39.9       | 4.1        | 102.4               | 29.6       | 0.0        |
| 4281 | 36.5          | 14.4       | 2.9        | 42.5       | 17.3       | 3.1        | 62.6                | 18.5       | 0.0        |
| 4282 | 76.2          | 28.8       | 3.1        | 88.7       | 34.6       | 3.4        | 81.8                | 24.1       | 0.0        |
| 4283 | 87.0          | 25.4       | 3.8        | 101.2      | 30.6       | 4.1        | 70.4                | 20.4       | 0.0        |

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Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4284 | 76.2          | 22.1       | 3.8        | 88.7       | 26.6       | 4.1        | 78.6                | 23.1       | 1.0        |
| 4285 | 0.0           | 0.0        | 29.2       | 0.0        | 0.0        | 30.2       | 0.0                 | 0.0        | 0.0        |
| 4286 | 6.0           | 2.1        | 10.9       | 7.9        | 2.8        | 11.3       | 0.0                 | 0.0        | 0.0        |
| 4287 | 8.0           | 3.0        | 1339.0     | 7.5        | 3.0        | 2909.0     | 16.0                | 4.6        | 1460.5     |
| 4288 | 0.0           | 0.0        | 419.8      | 0.0        | 0.0        | 591.6      | 0.0                 | 0.0        | 400.0      |
| 4289 | 248.0         | 73.0       | 2.0        | 363.5      | 114.0      | 6.0        | 2261.0              | 845.1      | 209.6      |
| 4290 | 2072.6        | 527.1      | 271.2      | 2283.0     | 618.5      | 278.6      | 1824.0              | 527.3      | 269.0      |
| 4291 | 301.4         | 77.9       | 91.8       | 332.0      | 91.5       | 94.4       | 479.9               | 141.9      | 64.0       |
| 4292 | 944.0         | 260.0      | 506.0      | 1076.9     | 316.0      | 666.0      | 1331.5              | 395.3      | 500.0      |
| 4293 | 1274.0        | 318.0      | 22.0       | 1564.3     | 416.0      | 126.0      | 1349.9              | 390.2      | 86.7       |
| 4294 | 236.0         | 137.0      | 20.0       | 313.7      | 194.0      | 28.0       | 1833.7              | 555.5      | 208.0      |
| 4295 | 163.0         | 85.0       | 998.0      | 162.0      | 90.0       | 1032.0     | 226.0               | 85.1       | 998.4      |
| 4296 | 0.0           | 0.0        | 131.0      | 0.0        | 0.0        | 204.0      | 0.0                 | 0.0        | 247.3      |
| 4297 | 23.0          | 9.0        | 175.0      | 21.6       | 9.0        | 241.0      | 218.1               | 86.0       | 193.1      |
| 4298 | 27.0          | 6.0        | 118.0      | 25.3       | 6.0        | 174.0      | 22.4                | 6.5        | 93.7       |
| 4299 | 1479.9        | 647.2      | 30.5       | 1603.4     | 747.1      | 77.8       | 2341.4              | 793.5      | 1.0        |
| 4300 | 1379.1        | 480.8      | 25.5       | 1494.1     | 554.9      | 65.2       | 1545.1              | 481.9      | 19.2       |
| 4301 | 108.0         | 33.0       | 9.5        | 184.3      | 60.0       | 18.3       | 1751.4              | 531.0      | 2.0        |
| 4302 | 0.0           | 0.0        | 3.5        | 0.0        | 0.0        | 6.7        | 126.5               | 44.3       | 103.2      |
| 4303 | 148.3         | 66.9       | 11.3       | 157.1      | 63.5       | 13.1       | 0.0                 | 0.0        | 0.0        |
| 4304 | 709.5         | 245.3      | 22.9       | 751.8      | 232.8      | 26.6       | 200.0               | 58.3       | 0.0        |
| 4305 | 348.9         | 166.2      | 33.1       | 369.6      | 157.8      | 38.6       | 1705.6              | 493.0      | 21.0       |
| 4306 | 0.0           | 0.0        | 0.8        | 0.0        | 0.0        | 0.8        | 124.8               | 36.1       | 0.0        |
| 4307 | 0.0           | 0.0        | 1.4        | 0.0        | 0.0        | 1.4        | 19.2                | 5.6        | 0.0        |
| 4308 | 0.0           | 0.0        | 4.8        | 0.0        | 0.0        | 4.8        | 230.4               | 66.6       | 20.0       |
| 4309 | 0.0           | 0.0        | 207.6      | 0.0        | 0.0        | 992.8      | 0.0                 | 0.0        | 1812.1     |
| 4310 | 0.0           | 0.0        | 17.0       | 0.0        | 0.0        | 279.4      | 0.0                 | 0.0        | 1892.1     |
| 4311 | 107.0         | 42.0       | 9.0        | 145.9      | 61.0       | 147.6      | 112.4               | 41.6       | 82.1       |
| 4312 | 0.0           | 0.0        | 260.0      | 0.0        | 0.0        | 269.0      | 0.0                 | 0.0        | 258.2      |
| 4313 | 0.0           | 0.0        | 1645.0     | 0.0        | 0.0        | 1819.0     | 0.0                 | 0.0        | 1645.0     |
| 4314 | 4.0           | 2.0        | 373.8      | 3.8        | 2.0        | 463.1      | 6.4                 | 1.9        | 977.0      |
| 4315 | 0.0           | 0.0        | 187.2      | 0.0        | 0.0        | 231.9      | 0.0                 | 0.0        | 226.5      |
| 4316 | 687.0         | 161.0      | 248.0      | 644.8      | 161.0      | 484.0      | 579.2               | 167.4      | 262.9      |
| 4317 | 0.0           | 0.0        | 834.0      | 0.0        | 0.0        | 1047.0     | 0.0                 | 0.0        | 833.8      |

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| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4318 | 0.0           | 0.0        | 350.0      | 0.0        | 0.0        | 559.0      | 0.0                 | 0.0        | 361.4      |
| 4319 | 811.0         | 185.0      | 345.0      | 1584.2     | 385.0      | 425.0      | 1508.0              | 527.3      | 338.3      |
| 4320 | 74.3          | 36.7       | 113.7      | 103.9      | 54.7       | 127.2      | 187.1               | 57.6       | 187.8      |
| 4321 | 316.7         | 137.3      | 96.3       | 442.4      | 204.3      | 107.8      | 398.4               | 138.8      | 172.3      |
| 4322 | 3501.0        | 848.0      | 314.0      | 3410.1     | 880.0      | 424.0      | 2572.3              | 853.0      | 307.9      |
| 4323 | 379.0         | 112.0      | 323.0      | 527.3      | 166.0      | 383.0      | 422.5               | 161.8      | 345.6      |
| 4324 | 741.0         | 179.0      | 457.0      | 913.1      | 235.0      | 594.0      | 1467.3              | 467.4      | 546.9      |
| 4325 | 1614.0        | 410.0      | 645.0      | 2926.4     | 792.0      | 716.0      | 1595.7              | 621.4      | 575.2      |
| 4326 | 1471.0        | 490.0      | 109.0      | 2169.7     | 770.0      | 122.0      | 1879.2              | 599.8      | 59.0       |
| 4327 | 600.0         | 133.0      | 220.0      | 1384.6     | 327.0      | 286.0      | 1201.8              | 393.7      | 223.3      |
| 4328 | 2592.0        | 693.0      | 352.0      | 3486.1     | 993.0      | 396.0      | 1824.9              | 694.9      | 339.5      |
| 4329 | 646.0         | 384.0      | 677.0      | 1378.5     | 873.0      | 1180.0     | 1250.9              | 486.5      | 726.4      |
| 4330 | 2177.0        | 590.0      | 435.0      | 2736.0     | 790.0      | 488.0      | 1612.6              | 619.2      | 433.7      |
| 4331 | 5394.1        | 1236.3     | 947.8      | 5387.0     | 1315.5     | 1036.2     | 4214.0              | 1259.2     | 952.0      |
| 4332 | 2615.0        | 623.0      | 66.0       | 3147.9     | 799.0      | 73.0       | 2147.5              | 637.9      | 36.0       |
| 4333 | 1.9           | 0.9        | 126.6      | 4.0        | 1.9        | 225.0      | 44.7                | 16.5       | 51.7       |
| 4334 | 797.1         | 186.1      | 231.4      | 1700.5     | 423.1      | 411.0      | 1100.2              | 331.3      | 196.3      |
| 4335 | 2753.0        | 678.0      | 263.0      | 3346.3     | 878.0      | 338.0      | 2247.9              | 692.9      | 218.5      |
| 4336 | 596.0         | 193.0      | 5.0        | 1371.0     | 473.0      | 5.0        | 810.4               | 292.2      | 0.0        |
| 4337 | 0.0           | 0.0        | 77.0       | 0.0        | 0.0        | 92.2       | 0.0                 | 0.0        | 0.0        |
| 4338 | 100.0         | 36.0       | 0.0        | 628.4      | 241.0      | 0.0        | 128.0               | 37.0       | 8.0        |
| 4339 | 1520.3        | 531.1      | 171.3      | 2361.6     | 878.9      | 194.6      | 1715.5              | 531.2      | 126.0      |
| 4340 | 985.7         | 320.9      | 182.7      | 1531.1     | 531.1      | 207.4      | 1104.0              | 320.2      | 110.5      |
| 4341 | 2096.0        | 499.0      | 316.0      | 2523.3     | 640.0      | 354.0      | 1713.1              | 500.3      | 301.3      |
| 4342 | 0.0           | 0.0        | 85.5       | 0.0        | 0.0        | 137.1      | 0.0                 | 0.0        | 1877.6     |
| 4343 | 0.0           | 0.0        | 4200.7     | 0.0        | 0.0        | 6734.0     | 0.0                 | 0.0        | 8115.3     |
| 4344 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4345 | 1171.3        | 379.6      | 577.6      | 1638.8     | 565.9      | 652.0      | 1070.6              | 378.4      | 538.0      |
| 4346 | 1795.0        | 817.0      | 212.0      | 2233.4     | 1083.0     | 296.0      | 2313.6              | 817.0      | 202.7      |
| 4347 | 639.0         | 159.0      | 112.0      | 1067.5     | 283.0      | 203.0      | 559.2               | 165.9      | 28.7       |
| 4348 | 2491.0        | 557.0      | 348.0      | 2669.7     | 636.0      | 372.0      | 1904.5              | 557.2      | 298.5      |
| 4349 | 2476.0        | 554.0      | 48.0       | 2449.9     | 584.0      | 60.0       | 2042.0              | 626.7      | 43.4       |
| 4350 | 17.0          | 8.9        | 1.8        | 17.4       | 8.3        | 2.0        | 9.6                 | 2.8        | 0.0        |
| 4351 | 85.0          | 40.8       | 6.9        | 86.8       | 38.3       | 7.7        | 69.0                | 20.4       | 0.0        |

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| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4352 | 227.3         | 95.9       | 5.8        | 232.0      | 89.9       | 6.5        | 136.2               | 39.8       | 0.0        |
| 4353 | 74.2          | 37.3       | 2.7        | 75.7       | 35.0       | 3.0        | 0.0                 | 0.0        | 0.0        |
| 4354 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 49.8                | 14.8       | 0.0        |
| 4355 | 10.0          | 5.0        | 0.0        | 336.0      | 179.0      | 0.0        | 19.2                | 5.6        | 0.0        |
| 4356 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 6.4                 | 1.9        | 0.0        |
| 4357 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4358 | 6883.0        | 1712.0     | 378.0      | 8343.6     | 2211.0     | 410.0      | 5926.4              | 1713.1     | 349.0      |
| 4359 | 1106.0        | 525.0      | 54.0       | 1566.1     | 792.0      | 59.0       | 1824.0              | 527.3      | 2.0        |
| 4360 | 464.0         | 109.0      | 81.0       | 1002.9     | 251.0      | 99.0       | 381.1               | 112.6      | 2.0        |
| 4361 | 2967.0        | 692.0      | 347.0      | 3127.0     | 777.0      | 352.0      | 2400.0              | 693.8      | 329.0      |
| 4362 | 1323.6        | 358.7      | 358.7      | 1592.6     | 459.9      | 425.6      | 2204.2              | 732.5      | 1042.8     |
| 4363 | 2819.0        | 923.0      | 243.0      | 3804.1     | 1327.0     | 266.0      | 2801.9              | 920.3      | 177.2      |
| 4364 | 2970.0        | 868.0      | 217.0      | 4027.4     | 1254.0     | 295.0      | 2781.3              | 867.3      | 173.0      |
| 4365 | 964.0         | 218.1      | 75.0       | 1930.1     | 465.2      | 114.5      | 750.7               | 217.2      | 10.0       |
| 4366 | 598.3         | 124.9      | 102.8      | 1197.8     | 266.4      | 157.0      | 488.2               | 141.1      | 100.0      |
| 4367 | 0.0           | 0.0        | 6.8        | 0.0        | 0.0        | 8.0        | 0.0                 | 0.0        | 0.0        |
| 4368 | 0.0           | 0.0        | 8.6        | 0.0        | 0.0        | 10.1       | 0.0                 | 0.0        | 0.0        |
| 4369 | 0.0           | 0.0        | 3.8        | 0.0        | 0.0        | 4.5        | 0.0                 | 0.0        | 0.0        |
| 4370 | 0.0           | 0.0        | 15.0       | 0.0        | 0.0        | 17.7       | 0.0                 | 0.0        | 0.0        |
| 4371 | 0.0           | 0.0        | 4.0        | 0.0        | 0.0        | 4.8        | 0.0                 | 0.0        | 0.0        |
| 4372 | 0.0           | 0.0        | 5.8        | 0.0        | 0.0        | 6.9        | 0.0                 | 0.0        | 0.0        |
| 4373 | 0.0           | 0.0        | 3.9        | 0.0        | 0.0        | 4.6        | 0.0                 | 0.0        | 0.0        |
| 4374 | 0.0           | 0.0        | 3700.9     | 0.0        | 0.0        | 5069.0     | 0.0                 | 0.0        | 4239.8     |
| 4375 | 0.0           | 0.0        | 44.7       | 0.0        | 0.0        | 61.2       | 0.0                 | 0.0        | 44.4       |
| 4376 | 0.0           | 0.0        | 41.4       | 0.0        | 0.0        | 56.7       | 0.0                 | 0.0        | 108.5      |
| 4377 | 0.0           | 0.0        | 28.3       | 0.0        | 0.0        | 28.3       | 0.0                 | 0.0        | 0.0        |
| 4378 | 0.0           | 0.0        | 1370.2     | 0.0        | 0.0        | 1370.2     | 0.0                 | 0.0        | 1535.2     |
| 4379 | 0.0           | 0.0        | 15.5       | 0.0        | 0.0        | 15.5       | 0.0                 | 0.0        | 0.0        |
| 4380 | 2.4           | 1.2        | 121.9      | 2.2        | 1.2        | 488.4      | 10.7                | 3.7        | 103.1      |
| 4381 | 40.3          | 10.5       | 129.2      | 37.8       | 10.5       | 517.7      | 150.4               | 43.5       | 58.5       |
| 4382 | 154.3         | 43.1       | 105.0      | 144.8      | 43.1       | 421.1      | 857.3               | 312.3      | 57.2       |
| 4383 | 5.0           | 1.2        | 129.9      | 4.7        | 1.2        | 520.8      | 1802.3              | 677.5      | 533.7      |
| 4384 | 0.0           | 0.0        | 100.7      | 0.0        | 0.0        | 106.4      | 0.0                 | 0.0        | 140.9      |
| 4385 | 0.0           | 0.0        | 102.0      | 0.0        | 0.0        | 107.7      | 0.0                 | 0.0        | 2.1        |

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Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4386 | 0.0           | 0.0        | 101.0      | 0.0        | 0.0        | 106.8      | 0.0                 | 0.0        | 386.8      |
| 4387 | 0.0           | 0.0        | 98.4       | 0.0        | 0.0        | 103.9      | 197.5               | 65.1       | 99.0       |
| 4388 | 2.3           | 1.3        | 99.3       | 2.2        | 1.3        | 104.9      | 57.6                | 21.4       | 244.6      |
| 4389 | 11.7          | 3.8        | 98.7       | 11.0       | 3.8        | 104.3      | 114.9               | 41.9       | 538.3      |
| 4390 | 0.0           | 0.0        | 7.4        | 0.0        | 0.0        | 13.2       | 0.0                 | 0.0        | 360.7      |
| 4391 | 0.0           | 0.0        | 7.4        | 0.0        | 0.0        | 13.1       | 0.0                 | 0.0        | 394.1      |
| 4392 | 2.3           | 1.1        | 7.5        | 3.5        | 1.8        | 13.3       | 13.7                | 5.1        | 362.8      |
| 4393 | 0.0           | 0.0        | 7.4        | 0.0        | 0.0        | 13.1       | 0.0                 | 0.0        | 836.5      |
| 4394 | 729.7         | 161.9      | 6.3        | 1130.4     | 267.2      | 11.3       | 2434.8              | 857.8      | 1254.1     |
| 4395 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 239.2      |
| 4396 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4397 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 53.7                | 15.7       | 0.0        |
| 4398 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 5253.9              | 1916.6     | 1070.7     |
| 4399 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 1453.2              | 479.1      | 745.8      |
| 4400 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4401 | 0.0           | 0.0        | 7.6        | 0.0        | 0.0        | 8.9        | 0.0                 | 0.0        | 0.0        |
| 4402 | 0.0           | 0.0        | 3.8        | 0.0        | 0.0        | 4.5        | 0.0                 | 0.0        | 0.0        |
| 4403 | 0.0           | 0.0        | 20.4       | 0.0        | 0.0        | 24.1       | 0.0                 | 0.0        | 0.0        |
| 4404 | 0.0           | 0.0        | 10.3       | 0.0        | 0.0        | 12.1       | 0.0                 | 0.0        | 0.0        |
| 4405 | 0.0           | 0.0        | 7.5        | 0.0        | 0.0        | 8.9        | 0.0                 | 0.0        | 0.0        |
| 4406 | 0.0           | 0.0        | 9.7        | 0.0        | 0.0        | 11.5       | 0.0                 | 0.0        | 0.0        |
| 4407 | 40.5          | 18.4       | 57.2       | 51.6       | 23.6       | 70.9       | 28.8                | 8.3        | 0.0        |
| 4408 | 9.6           | 4.1        | 35.0       | 12.3       | 5.2        | 43.3       | 3.2                 | 0.9        | 0.0        |
| 4409 | 843.9         | 243.5      | 22.9       | 1076.2     | 311.8      | 28.4       | 422.4               | 122.1      | 0.0        |
| 4410 | 0.0           | 0.0        | 32.8       | 0.0        | 0.0        | 40.7       | 0.0                 | 0.0        | 0.0        |
| 4411 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 3.2                 | 0.9        | 0.0        |
| 4412 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 73.6                | 21.3       | 0.0        |
| 4413 | 87.2          | 30.2       | 2.9        | 147.6      | 54.4       | 15.3       | 98.8                | 29.8       | 0.0        |
| 4414 | 258.8         | 96.8       | 5.1        | 438.0      | 174.6      | 26.7       | 326.7               | 97.5       | 26.0       |
| 4415 | 471.0         | 159.0      | 20.0       | 589.5      | 212.0      | 20.0       | 559.7               | 162.0      | 229.0      |
| 4416 | 1.2           | 0.3        | 2.6        | 1.1        | 0.3        | 26.6       | 19.2                | 5.6        | 0.0        |
| 4417 | 4.8           | 1.8        | 2.4        | 4.5        | 1.8        | 25.4       | 121.6               | 35.2       | 4.1        |
| 4418 | 52.0          | 20.0       | 81.0       | 73.2       | 30.0       | 84.0       | 70.4                | 20.4       | 0.0        |
| 4419 | 4043.0        | 917.0      | 198.0      | 4159.0     | 1005.0     | 281.0      | 3171.2              | 916.7      | 194.1      |

Traffic Report

Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing |            |            | 2045 Base  |            |            | 2045 Preferred Plan |            |            |
|------|---------------|------------|------------|------------|------------|------------|---------------------|------------|------------|
|      | Population    | Households | Employment | Population | Households | Employment | Population          | Households | Employment |
| 4420 | 3952.0        | 874.0      | 434.0      | 4265.4     | 1005.0     | 507.0      | 3040.0              | 878.8      | 483.9      |
| 4421 | 1887.5        | 435.0      | 28.5       | 2717.4     | 667.2      | 32.5       | 1543.8              | 446.2      | 13.0       |
| 4422 | 1836.4        | 395.3      | 82.8       | 2669.1     | 612.2      | 94.9       | 1374.5              | 397.3      | 83.2       |
| 4423 | 1185.6        | 295.7      | 81.2       | 1723.2     | 457.8      | 93.1       | 1024.0              | 296.0      | 70.0       |
| 4424 | 1622.3        | 381.2      | 26.3       | 2272.8     | 568.9      | 32.3       | 1344.0              | 388.5      | 2.0        |
| 4425 | 1385.7        | 292.8      | 25.7       | 1941.3     | 437.1      | 31.7       | 1280.0              | 370.0      | 22.0       |
| 4426 | 1998.0        | 443.0      | 333.0      | 2696.6     | 637.0      | 341.0      | 1646.0              | 475.8      | 314.0      |
| 4427 | 1983.0        | 457.0      | 42.0       | 2659.6     | 653.0      | 42.0       | 1600.0              | 462.5      | 32.0       |
| 4428 | 0.0           | 0.0        | 475.0      | 0.0        | 0.0        | 475.0      | 321.2               | 113.8      | 542.5      |
| 4429 | 5.0           | 2.0        | 28.3       | 6.3        | 2.7        | 29.4       | 0.0                 | 0.0        | 30.0       |
| 4430 | 0.0           | 0.0        | 23.5       | 0.0        | 0.0        | 24.3       | 0.0                 | 0.0        | 0.0        |
| 4431 | 5243.0        | 1186.0     | 870.0      | 7995.9     | 1927.0     | 955.0      | 5106.4              | 1476.1     | 886.1      |
| 4432 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 455.0               | 157.6      | 105.9      |
| 4433 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4434 | 7.0           | 3.0        | 0.0        | 359.2      | 164.0      | 0.0        | 64.3                | 18.6       | 2.3        |
| 4435 | 930.0         | 191.0      | 9.0        | 1247.7     | 273.0      | 45.0       | 673.0               | 194.6      | 27.4       |
| 4436 | 298.0         | 96.0       | 4.5        | 422.5      | 145.0      | 7.2        | 332.9               | 96.2       | 1.8        |
| 4437 | 0.0           | 0.0        | 38.5       | 0.0        | 0.0        | 60.8       | 0.0                 | 0.0        | 0.0        |
| 4438 | 1.0           | 1.0        | 8.0        | 1.9        | 2.0        | 73.0       | 6.4                 | 1.9        | 76.7       |
| 4439 | 0.0           | 0.0        | 21.0       | 0.0        | 0.0        | 24.0       | 0.0                 | 0.0        | 0.0        |
| 4440 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4441 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 273.4               | 85.6       | 14.5       |
| 4442 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 0.0        |
| 4443 | 100.4         | 34.8       | 30.4       | 120.8      | 43.7       | 30.4       | 120.8               | 43.7       | 30.4       |
| 4444 | 304.2         | 84.6       | 30.0       | 365.7      | 106.4      | 29.9       | 365.7               | 106.4      | 29.9       |
| 4445 | 1388.8        | 414.0      | 48.3       | 1670.0     | 520.8      | 48.2       | 1670.0              | 520.8      | 48.2       |
| 4446 | 1344.3        | 420.1      | 49.8       | 1616.5     | 528.4      | 49.8       | 1616.5              | 528.4      | 49.8       |
| 4447 | 229.6         | 75.6       | 48.2       | 276.0      | 95.0       | 48.1       | 276.0               | 95.0       | 48.1       |
| 4448 | 23.0          | 7.6        | 161.9      | 27.6       | 9.5        | 161.7      | 27.6                | 9.5        | 161.7      |
| 4449 | 119.1         | 40.8       | 220.7      | 143.2      | 51.3       | 220.3      | 143.2               | 51.3       | 220.3      |
| 4450 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 584.0               | 169.3      | 6.0        |
| 4451 | 0.0           | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0                 | 0.0        | 1.0        |
| 4452 | 25.4          | 6.4        | 30.5       | 30.2       | 8.0        | 30.0       | 30.2                | 8.0        | 30.0       |
| 4453 | 519.7         | 128.1      | 30.5       | 619.1      | 159.2      | 30.0       | 619.1               | 159.2      | 30.0       |

Traffic Report

Socioeconomic Data Summary for the Palmdale Sphere of Influence

| TAZ  | 2017 Existing    |                 |                 | 2045 Base        |                 |                 | 2045 Preferred Plan |                 |                 |
|------|------------------|-----------------|-----------------|------------------|-----------------|-----------------|---------------------|-----------------|-----------------|
|      | Population       | Households      | Employment      | Population       | Households      | Employment      | Population          | Households      | Employment      |
| 4454 | 520.7            | 129.1           | 26.9            | 620.4            | 160.5           | 26.5            | 620.4               | 160.5           | 26.5            |
| 4455 | 508.5            | 123.8           | 26.7            | 605.8            | 153.9           | 26.3            | 605.8               | 153.9           | 26.3            |
| 4456 | 528.8            | 133.4           | 30.7            | 630.0            | 165.9           | 30.2            | 630.0               | 165.9           | 30.2            |
| 4457 | 789.6            | 234.8           | 62.9            | 940.8            | 291.9           | 62.0            | 940.8               | 291.9           | 62.0            |
| 4458 | 2154.7           | 576.4           | 121.5           | 2567.3           | 716.5           | 119.6           | 2567.3              | 716.5           | 119.6           |
| 4459 | 43.6             | 13.9            | 118.1           | 52.0             | 17.2            | 116.3           | 52.0                | 17.2            | 116.3           |
| 4460 | 880.0            | 254.0           | 114.3           | 1048.4           | 315.8           | 112.5           | 1048.4              | 315.8           | 112.5           |
| 4461 | 74.1             | 20.3            | 33.8            | 88.3             | 25.2            | 33.3            | 3.2                 | 0.9             | 0.0             |
| 4462 | 26.4             | 7.5             | 16.4            | 31.4             | 9.3             | 16.1            | 3.2                 | 0.9             | 0.0             |
| 4463 | 343.1            | 85.4            | 29.8            | 408.7            | 106.1           | 29.3            | 134.4               | 38.9            | 0.0             |
| 4464 | 333.9            | 90.7            | 30.4            | 397.8            | 112.8           | 29.9            | 144.0               | 41.6            | 31.0            |
| 4465 | 417.1            | 102.5           | 31.0            | 497.0            | 127.4           | 30.5            | 281.6               | 81.4            | 1.0             |
| 4466 | 0.0              | 0.0             | 30.5            | 0.0              | 0.0             | 30.0            | 0.0                 | 0.0             | 45.0            |
| 4467 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 0.0                 | 0.0             | 0.0             |
| 4468 | 373.5            | 122.9           | 26.9            | 384.8            | 101.1           | 120.8           | 384.8               | 101.1           | 120.8           |
| 4469 | 2.0              | 1.5             | 0.0             | 1.9              | 1.5             | 0.0             | 6.4                 | 1.9             | 0.0             |
| 4470 | 2.0              | 1.5             | 0.0             | 1.9              | 1.5             | 0.0             | 6.4                 | 1.9             | 0.0             |
| 4471 | 6.0              | 2.0             | 6.0             | 7.0              | 2.5             | 9.5             | 16.0                | 4.6             | 12.0            |
| 4472 | 6.0              | 2.0             | 6.0             | 7.0              | 2.5             | 9.5             | 32.0                | 9.3             | 0.0             |
| 4473 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 0.0                 | 0.0             | 0.0             |
| 4474 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 0.0                 | 0.0             | 0.0             |
| 4475 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 0.0                 | 0.0             | 0.0             |
| 4476 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 0.0                 | 0.0             | 0.0             |
| 4477 | 0.0              | 0.0             | 2.0             | 0.0              | 0.0             | 2.0             | 114.5               | 33.3            | 17.0            |
| 4478 | 0.0              | 0.0             | 0.0             | 0.0              | 0.0             | 0.0             | 16.0                | 4.6             | 0.0             |
| 4479 | 22.9             | 4.5             | 1.0             | 25.5             | 4.5             | 1.1             | 16.0                | 4.6             | 0.0             |
| 4480 | 109.7            | 43.1            | 9.9             | 122.2            | 43.2            | 11.1            | 122.2               | 43.2            | 11.1            |
| 4481 | 135.0            | 71.4            | 18.8            | 150.4            | 71.5            | 21.0            | 150.4               | 71.5            | 21.0            |
| 4482 | 3.6              | 1.5             | 4.6             | 4.0              | 1.5             | 5.1             | 4.0                 | 1.5             | 5.1             |
| 4483 | 964.0            | 289.9           | 2.1             | 1074.4           | 290.5           | 2.3             | 1074.4              | 290.5           | 2.3             |
|      | <b>188,488.0</b> | <b>53,626.0</b> | <b>49,501.2</b> | <b>240,515.4</b> | <b>72,840.2</b> | <b>67,084.6</b> | <b>225,692.0</b>    | <b>70,618.1</b> | <b>74,804.4</b> |



# Appendix E

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Traffic Noise Prediction Model



|      |      |      |      |      |     |     |   |                                  |                                  |       |    |     |     |    |     |     |     |     |      |      |     |     |
|------|------|------|------|------|-----|-----|---|----------------------------------|----------------------------------|-------|----|-----|-----|----|-----|-----|-----|-----|------|------|-----|-----|
| 11   | 69.1 | 72.8 | 73.2 | 82   | 176 | 380 | 10th Street W/Tierra Subida Ave         | W Palmdale Blvd to Rayburn Rd    | 16,569                           | 45    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 72.8 | 76.5 | 76.9 | 145  | 312 | 672 | Sierra Hwy                              | Columbia Way to E Avenue N       | 25,408                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 73.1 | 76.8 | 77.2 | 151  | 325 | 700 | Sierra Hwy                              | E Avenue N to E Avenue O         | 27,037                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 73.8 | 77.6 | 77.9 | 169  | 365 | 785 | Sierra Hwy                              | E Avenue O to E Avenue P         | 32,133                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.4 | 74.1 | 74.4 | 99   | 213 | 459 | Sierra Hwy                              | E Avenue P to E Avenue Q         | 14,366                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.6 | 74.3 | 74.7 | 103  | 221 | 476 | Sierra Hwy                              | E Avenue Q to Palmdale Blvd      | 15,176                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 68.8 | 72.5 | 72.9 | 78   | 167 | 360 | Sierra Hwy                              | Palmdale Blvd to E Avenue R      | 9,993                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 67.4 | 71.1 | 71.5 | 63   | 136 | 292 | Sierra Hwy                              | E Avenue R to E Avenue S         | 7,289                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 67.8 | 71.6 | 71.9 | 67   | 145 | 313 | Sierra Hwy                              | E Avenue S to Pearlblossom Hwy   | 8,070                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 59.0 | 62.7 | 63.1 | 17   | 37  | 81  | 10th Street E                           | E Avenue P to E Avenue Q         | 2,357                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
| 12   | 63.0 | 66.7 | 67.1 | 32   | 69  | 149 | 10th Street E                           | E Avenue Q to E Palmdale Blvd    | 5,732                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 62.9 | 66.6 | 67.0 | 32   | 68  | 146 | 10th Street E                           | E Palmdale Blvd to Avenue R      | 5,756                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 61.2 | 64.9 | 65.3 | 24   | 52  | 113 | 10th Street E                           | Avenue R to Avenue S1            | 3,898                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 59.2 | 62.9 | 63.3 | 18   | 39  | 83  | 20th Street E                           | E Avenue P to E Avenue Q         | 4,738                            | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 61.4 | 65.1 | 65.4 | 25   | 54  | 115 | 20th Street E                           | E Avenue Q to Palmdale Blvd      | 7,760                            | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 63.7 | 67.5 | 67.8 | 36   | 77  | 167 | 20th Street E                           | Palmdale Blvd to E Avenue R      | 13,063                           | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 63.5 | 67.2 | 67.5 | 34   | 74  | 159 | 20th Street E                           | E Avenue R to E Avenue S         | 12,215                           | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 63.3 | 67.0 | 67.4 | 33   | 72  | 155 | 25th Street E                           | E Avenue P to E Avenue Q         | 4,102                            | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 65.6 | 69.3 | 69.7 | 47   | 102 | 220 | 25th Street E                           | E Avenue Q to Palmdale Blvd      | 6,948                            | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 68.4 | 72.1 | 72.5 | 73   | 157 | 339 | 25th Street E                           | Palmdale Blvd to E Avenue R      | 12,851                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
| 13   | 69.5 | 73.2 | 73.6 | 87   | 187 | 402 | 25th Street E                           | E Avenue R to E Avenue S         | 16,629                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 68.8 | 72.5 | 72.9 | 78   | 169 | 363 | 25th Street E                           | E Avenue S to Pearlblossom Hwy   | 14,269                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 62.3 | 66.0 | 66.3 | 29   | 62  | 133 | 30th Street E                           | E Avenue P to E Avenue Q         | 5,987                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 62.3 | 66.0 | 66.4 | 29   | 62  | 134 | 30th Street E                           | E Avenue Q to Palmdale Blvd      | 6,083                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 63.5 | 67.2 | 67.6 | 34   | 74  | 160 | 30th Street E                           | Palmdale Blvd to E Avenue R      | 7,721                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 64.1 | 67.8 | 68.2 | 38   | 82  | 176 | 30th Street E                           | E Avenue R to E Avenue S         | 8,871                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 63.2 | 66.9 | 67.3 | 33   | 71  | 153 | 40th Street E                           | E Avenue P to E Avenue Q         | 5,610                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 64.3 | 68.0 | 68.3 | 39   | 84  | 180 | 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 7,185                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 65.7 | 69.4 | 69.8 | 48   | 104 | 225 | 40th Street E                           | E Palmdale Blvd to E Avenue R    | 9,892                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 3   | Soft | 50   | 0.5 | 32  |
|      | 65.3 | 69.0 | 69.4 | 46   | 98  | 211 | 40th Street E                           | E Avenue R to E Avenue S         | 9,037                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 3   | Soft | 50   | 0.5 | 32  |
| 14   | 65.9 | 69.6 | 70.0 | 50   | 108 | 232 | 40th Street E                           | E Avenue S to Sierra Hwy         | 10,505                           | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 69.5 | 73.2 | 73.6 | 87   | 188 | 405 | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 18,016                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 68.1 | 71.8 | 72.2 | 70   | 150 | 324 | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 12,874                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 71.2 | 74.9 | 75.3 | 113  | 243 | 523 | 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 25,702                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 71.4 | 75.1 | 75.5 | 116  | 251 | 540 | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 26,908                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.1 | 73.8 | 74.2 | 95   | 205 | 441 | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 19,854                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 71.1 | 74.8 | 75.2 | 111  | 239 | 515 | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 24,514                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 5   | Soft | 50   | 0.5 | 56  |
|      | 71.0 | 74.7 | 75.1 | 109  | 234 | 505 | 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearlblossom Hwy     | 24,367                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.3 | 74.1 | 74.4 | 99   | 213 | 459 | 47th Street E/50th Street E/Ft Tejon Rd | Pearlblossom Hwy to E Avenue T-8 | 21,099                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 15   | 64.4 | 68.1 | 68.5 | 40  | 85  | 184                                     | Technology Dr                    | 10th Street W to Trade Center Dr | 7,205 | 39 | 0   | 92% | 3% | 5%  | 75% | 10% | 15% | 4    | Soft | 50  | 0.5 |
| 64.6 |      | 68.3 | 68.7 | 41   | 88  | 190 | Technology Dr                           | 5th Street W to Division St      | 7,574                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
| 64.7 |      | 68.5 | 68.8 | 42   | 90  | 194 | Technology Dr                           | Division St to Sierra Hwy        | 7,805                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |



|      |      |      |      |      |     |      |   |                                  |                                  |       |    |     |     |    |     |     |     |     |      |      |     |     |
|------|------|------|------|------|-----|------|---|----------------------------------|----------------------------------|-------|----|-----|-----|----|-----|-----|-----|-----|------|------|-----|-----|
| 11   | 69.6 | 73.3 | 73.7 | 88   | 190 | 409  | 10th Street W/Tierra Subida Ave         | W Palmdale Blvd to Rayburn Rd    | 18,512                           | 45    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 74.6 | 78.3 | 78.7 | 189  | 407 | 877  | Sierra Hwy                              | Columbia Way to E Avenue N       | 37,932                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 74.4 | 78.1 | 78.5 | 183  | 395 | 850  | Sierra Hwy                              | E Avenue N to E Avenue O         | 36,183                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 76.1 | 79.8 | 80.2 | 238  | 513 | 1105 | Sierra Hwy                              | E Avenue O to E Avenue P         | 53,660                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.4 | 74.1 | 74.4 | 99   | 213 | 459  | Sierra Hwy                              | E Avenue P to E Avenue Q         | 14,366                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.6 | 74.3 | 74.7 | 103  | 222 | 478  | Sierra Hwy                              | E Avenue Q to Palmdale Blvd      | 15,253                           | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 68.8 | 72.5 | 72.9 | 78   | 167 | 360  | Sierra Hwy                              | Palmdale Blvd to E Avenue R      | 9,993                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 67.4 | 71.1 | 71.5 | 63   | 136 | 292  | Sierra Hwy                              | E Avenue R to E Avenue S         | 7,289                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 67.8 | 71.6 | 71.9 | 67   | 145 | 313  | Sierra Hwy                              | E Avenue S to Pearlblossom Hwy   | 8,070                            | 56    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 59.0 | 62.7 | 63.1 | 17   | 37  | 81   | 10th Street E                           | E Avenue P to E Avenue Q         | 2,357                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
| 12   | 63.0 | 66.7 | 67.1 | 32   | 69  | 149  | 10th Street E                           | E Avenue Q to E Palmdale Blvd    | 5,732                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 62.9 | 66.6 | 67.0 | 32   | 68  | 146  | 10th Street E                           | E Palmdale Blvd to Avenue R      | 5,756                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 61.2 | 64.9 | 65.3 | 24   | 52  | 113  | 10th Street E                           | Avenue R to Avenue S1            | 3,898                            | 37    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 60.5 | 64.2 | 64.6 | 22   | 47  | 101  | 20th Street E                           | E Avenue P to E Avenue Q         | 6,362                            | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 62.3 | 66.1 | 66.4 | 29   | 62  | 134  | 20th Street E                           | E Avenue Q to Palmdale Blvd      | 9,746                            | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 63.7 | 67.5 | 67.8 | 36   | 77  | 167  | 20th Street E                           | Palmdale Blvd to E Avenue R      | 13,063                           | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 63.7 | 67.4 | 67.8 | 36   | 77  | 166  | 20th Street E                           | E Avenue R to E Avenue S         | 12,938                           | 37    | 0  | 97% | 2%  | 1% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 66.5 | 70.2 | 70.6 | 55   | 118 | 255  | 25th Street E                           | E Avenue P to E Avenue Q         | 8,624                            | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 66.7 | 70.4 | 70.8 | 56   | 121 | 261  | 25th Street E                           | E Avenue Q to Palmdale Blvd      | 8,947                            | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 68.4 | 72.1 | 72.5 | 74   | 159 | 342  | 25th Street E                           | Palmdale Blvd to E Avenue R      | 13,007                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
| 13   | 69.5 | 73.2 | 73.6 | 87   | 187 | 402  | 25th Street E                           | E Avenue R to E Avenue S         | 16,629                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 68.8 | 72.5 | 72.9 | 78   | 169 | 363  | 25th Street E                           | E Avenue S to Pearlblossom Hwy   | 14,269                           | 47    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 63.5 | 67.2 | 67.6 | 35   | 74  | 160  | 30th Street E                           | E Avenue P to E Avenue Q         | 7,961                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 63.4 | 67.1 | 67.5 | 34   | 73  | 158  | 30th Street E                           | E Avenue Q to Palmdale Blvd      | 7,821                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 63.8 | 67.5 | 67.9 | 36   | 78  | 169  | 30th Street E                           | Palmdale Blvd to E Avenue R      | 8,354                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 64.1 | 67.8 | 68.2 | 38   | 82  | 176  | 30th Street E                           | E Avenue R to E Avenue S         | 8,871                            | 33    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 66.4 | 70.2 | 70.5 | 54   | 117 | 252  | 40th Street E                           | E Avenue P to E Avenue Q         | 11,891                           | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 64.3 | 68.0 | 68.3 | 39   | 84  | 180  | 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 7,185                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 67.2 | 70.9 | 71.3 | 61   | 132 | 284  | 40th Street E                           | E Palmdale Blvd to E Avenue R    | 14,092                           | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 3   | Soft | 50   | 0.5 | 32  |
|      | 66.7 | 70.4 | 70.8 | 56   | 121 | 262  | 40th Street E                           | E Avenue R to E Avenue S         | 12,432                           | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 3   | Soft | 50   | 0.5 | 32  |
| 14   | 65.9 | 69.7 | 70.0 | 50   | 108 | 233  | 40th Street E                           | E Avenue S to Sierra Hwy         | 10,612                           | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 70.6 | 74.3 | 74.7 | 103  | 221 | 476  | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 22,987                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 69.1 | 72.8 | 73.2 | 81   | 175 | 377  | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 16,180                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 2   | Soft | 50   | 0.5 | 20  |
|      | 71.4 | 75.1 | 75.4 | 115  | 249 | 535  | 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 26,588                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 71.4 | 75.1 | 75.5 | 116  | 251 | 540  | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 26,908                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 70.1 | 73.8 | 74.2 | 95   | 205 | 441  | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 19,854                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 71.8 | 75.5 | 75.9 | 124  | 266 | 574  | 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 28,816                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 5   | Soft | 50   | 0.5 | 56  |
|      | 71.0 | 74.7 | 75.1 | 109  | 234 | 505  | 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearlblossom Hwy     | 24,367                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 72.0 | 75.7 | 76.1 | 127  | 274 | 591  | 47th Street E/50th Street E/Ft Tejon Rd | Pearlblossom Hwy to E Avenue T-8 | 30,811                           | 46    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
|      | 15   | 64.4 | 68.1 | 68.5 | 40  | 86   | 185                                     | Technology Dr                    | 10th Street W to Trade Center Dr | 7,277 | 39 | 0   | 92% | 3% | 5%  | 75% | 10% | 15% | 4    | Soft | 50  | 0.5 |
| 64.6 |      | 68.3 | 68.7 | 41   | 88  | 190  | Technology Dr                           | 5th Street W to Division St      | 7,574                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |
| 64.7 |      | 68.5 | 68.8 | 42   | 90  | 194  | Technology Dr                           | Division St to Sierra Hwy        | 7,805                            | 39    | 0  | 92% | 3%  | 5% | 75% | 10% | 15% | 4   | Soft | 50   | 0.5 | 44  |

| Roadway                   | Segment                          | Existing ADT | 2045 Preferred Plan ADT | Existing CNEL at 50 feet | 2045 CNEL at 50 feet | Traffic Noise Increase |
|---------------------------|----------------------------------|--------------|-------------------------|--------------------------|----------------------|------------------------|
| Columbia Way/Avenue M     | 10th Street W to Sierra Hwy      | 23,348       | 32,760                  | 75.2                     | 76.7                 | 1.5                    |
| Columbia Way/Avenue M     | Sierra Hwy to 10th Street E      | 28,434       | 35,733                  | 76.1                     | 77.1                 | 1.0                    |
| Columbia Way/Avenue M     | 10th Street E to 20th Street E   | 17,513       | 23,321                  | 74.0                     | 75.2                 | 1.2                    |
| Columbia Way/Avenue M     | 20th Street E to 30th Street E   | 13,832       | 17,482                  | 73.0                     | 74.0                 | 1.0                    |
| Columbia Way/Avenue M     | 30th Street E to 40th Street E   | 7,475        | 12,192                  | 70.3                     | 72.4                 | 2.1                    |
| Columbia Way/Avenue M     | 40th Street E to 50th Street     | 10,559       | 14,334                  | 71.8                     | 73.1                 | 1.3                    |
| Rancho Vista Ave/Avenue P | 50th Street W to Town Center Dr  | 16,758       | 16,758                  | 72.6                     | 72.3                 | -0.2                   |
| Rancho Vista Ave/Avenue P | Town Center Dr to 30th Street W  | 20,985       | 20,985                  | 73.3                     | 73.3                 | 0.0                    |
| Rancho Vista Ave/Avenue P | 30th Street W to 25th Street W   | 22,457       | 22,457                  | 73.6                     | 73.6                 | 0.0                    |
| Rancho Vista Ave/Avenue P | 25th Street W to 20th Street W   | 27,509       | 27,509                  | 74.5                     | 74.5                 | 0.0                    |
| Rancho Vista Ave/Avenue P | 20th Street W to 15th Street W   | 26,453       | 27,276                  | 74.3                     | 74.5                 | 0.1                    |
| Rancho Vista Ave/Avenue P | 15th Street to 10th Street W     | 41,536       | 41,536                  | 76.5                     | 76.5                 | 0.0                    |
| Rancho Vista Ave/Avenue P | 10th Street W to SR 14           | 35,290       | 35,290                  | 75.8                     | 75.8                 | 0.0                    |
| Rancho Vista Ave/Avenue P | SR 14 to Country Club Dr         | 23,332       | 23,332                  | 73.8                     | 73.8                 | 0.0                    |
| Rancho Vista Ave/Avenue P | Country Club Dr to Division St   | 26,481       | 26,481                  | 74.3                     | 74.3                 | 0.0                    |
| Rancho Vista Ave/Avenue P | Division St to Sierra Hwy        | 22,334       | 22,334                  | 73.6                     | 73.6                 | 0.0                    |
| East Avenue P             | Sierra Hwy to 8th Street E       | 33,863       | 37,052                  | 75.4                     | 75.8                 | 0.4                    |
| East Avenue P             | 8th Street E to 15th Street E    | 24,509       | 27,698                  | 74.0                     | 74.5                 | 0.5                    |
| East Avenue P             | 15th Street E to 20th Street E   | 24,973       | 30,657                  | 74.1                     | 75.0                 | 0.9                    |
| East Avenue P             | 20th Street E to 25th Street E   | 18,699       | 23,798                  | 72.8                     | 73.9                 | 1.0                    |
| East Avenue P             | 25th Street E to 30th Street E   | 14,695       | 18,896                  | 71.8                     | 72.9                 | 1.1                    |
| Avenue Q                  | Trade Center Dr to 5th Street W  | 2,216        | 4,805                   | 63.4                     | 66.7                 | 3.4                    |
| Avenue Q                  | Division Street to 6th Street E  | 3,815        | 8,053                   | 65.7                     | 68.8                 | 3.1                    |
| Avenue Q                  | Sierra Hwy to 10th Street E      | 9,447        | 10,165                  | 69.5                     | 69.9                 | 0.3                    |
| Avenue Q                  | 10th Street E to 20th Street E   | 8,323        | 8,349                   | 69.0                     | 69.0                 | 0.0                    |
| Avenue Q                  | 20th Street E to 30th Street E   | 7,106        | 7,293                   | 68.3                     | 68.4                 | 0.1                    |
| Avenue Q                  | 30th Street E to 40th Street E   | 4,960        | 7,814                   | 66.7                     | 68.7                 | 2.0                    |
| Elizabeth Lake Rd         | 25th Street W to 20th Street W   | 13,937       | 20,874                  | 72.5                     | 74.2                 | 1.8                    |
| Elizabeth Lake Rd         | 20th Street W to 15th Street W   | 13,828       | 16,038                  | 72.4                     | 73.1                 | 0.6                    |
| Elizabeth Lake Rd         | 15th Street W to 10th Street W   | 18,930       | 19,583                  | 73.8                     | 73.9                 | 0.1                    |
| Palmdale Blvd             | 10th Street W to Trade Center Dr | 17,408       | 22,179                  | 74.3                     | 75.3                 | 1.1                    |
| Palmdale Blvd             | Trade Center Dr to 5th Street W  | 16,548       | 17,785                  | 74.1                     | 74.4                 | 0.3                    |
| Palmdale Blvd             | 5th Street W to State Route 14   | 27,366       | 27,366                  | 76.3                     | 76.3                 | 0.0                    |
| Palmdale Blvd             | Division Street to 5th St E      | 25,175       | 25,510                  | 76.1                     | 76.2                 | 0.1                    |
| Palmdale Blvd             | 5th Street E to 10th Street E    | 25,257       | 25,257                  | 75.9                     | 75.9                 | 0.0                    |
| Palmdale Blvd             | 10th Street E to 15th Street E   | 25,869       | 25,869                  | 76.0                     | 76.0                 | 0.0                    |
| Palmdale Blvd             | 15th Street E to 20th Street E   | 19,223       | 19,233                  | 74.7                     | 74.7                 | 0.0                    |
| Palmdale Blvd             | 20th Street E to 25th Street E   | 23,470       | 24,649                  | 75.6                     | 75.8                 | 0.2                    |
| Palmdale Blvd             | 40th Street E to 47th Street E   | 18,458       | 28,011                  | 74.6                     | 76.4                 | 1.8                    |
| Palmdale Blvd             | 50th Street E to 60th Street E   | 14,147       | 23,700                  | 73.4                     | 75.6                 | 2.2                    |
| Palmdale Blvd             | 70th Street E to 80th Street E   | 16,681       | 16,681                  | 74.1                     | 74.0                 | -0.1                   |
| E Avenue R                | Sierra Hwy to 10th Street E      | 19,490       | 19,490                  | 72.2                     | 72.2                 | 0.0                    |
| E Avenue R                | 10th Street E to 20th Street E   | 18,495       | 18,495                  | 72.0                     | 72.0                 | 0.0                    |
| E Avenue R                | 20th Street E to 30th Street E   | 18,408       | 18,408                  | 72.0                     | 72.0                 | 0.0                    |
| E Avenue R                | 30th Street E to 40th Street E   | 14,851       | 18,843                  | 71.0                     | 72.0                 | 1.0                    |

|                                 |                                   |        |        |      |      |     |
|---------------------------------|-----------------------------------|--------|--------|------|------|-----|
| E Avenue R                      | 40th Street E to 47th Street E    | 16,231 | 22,831 | 71.4 | 72.9 | 1.5 |
| E Avenue R                      | 47th Street E to 60th Street E    | 15,158 | 17,279 | 71.1 | 71.7 | 0.6 |
| E Avenue R                      | 60th Street E to 70th Street E    | 5,811  | 6,564  | 67.0 | 67.5 | 0.5 |
| Avenue S                        | Tovey Avenue to Tierra Subida Ave | 9,346  | 10,895 | 69.3 | 69.7 | 0.4 |
| Avenue S                        | Tierra Subida Ave to SR 14        | 14,027 | 17,336 | 70.8 | 71.7 | 0.9 |
| Avenue S                        | SR 14 to 5th Street E             | 13,190 | 13,190 | 70.5 | 70.5 | 0.0 |
| Avenue S                        | 5th Street E to Sierra Hwy        | 25,828 | 25,828 | 73.4 | 73.4 | 0.0 |
| Avenue S                        | Sierra Hwy to 10th Street E       | 32,170 | 32,170 | 74.4 | 74.4 | 0.0 |
| Avenue S                        | 10th Street E to 20th Street E    | 29,830 | 29,830 | 74.1 | 74.1 | 0.0 |
| Avenue S                        | 20th Street E to 25th Street E    | 30,323 | 30,323 | 74.1 | 74.1 | 0.0 |
| Avenue S                        | 25th Street E to 30th Street E    | 29,058 | 29,058 | 74.0 | 74.0 | 0.0 |
| Avenue S                        | 30th Street E to 35th Street E    | 24,137 | 24,137 | 73.4 | 73.4 | 0.0 |
| Avenue S                        | 35th Street E to 40th Street E    | 23,612 | 23,612 | 73.3 | 73.3 | 0.0 |
| Avenue S                        | 40th Street E to 47th Street E    | 23,867 | 23,867 | 73.3 | 73.3 | 0.0 |
| Avenue S                        | 47th Street E to 55th Street E    | 21,305 | 21,305 | 72.6 | 72.6 | 0.0 |
| Pearblossom Hwy/Avenue T        | Sierra Hwy to 25th Street E       | 48,960 | 52,520 | 78.4 | 78.8 | 0.3 |
| Pearblossom Hwy/Avenue T        | 25th Street E to 40th Street E    | 40,419 | 45,045 | 77.6 | 78.1 | 0.5 |
| Pearblossom Hwy/Avenue T        | 40th Street E to 47th Street E    | 22,788 | 31,951 | 75.1 | 76.6 | 1.5 |
| Pearblossom Hwy/Avenue T        | 47th Street E to Fort Tejon Road  | 22,898 | 32,061 | 75.1 | 76.6 | 1.5 |
| Pearblossom Hwy/Avenue T        | Fort Tejon Road to 70th Street E  | 13,027 | 22,190 | 72.7 | 75.0 | 2.3 |
| 10th Street W/Tierra Subida Ave | W Avenue M to W Avenue N          | 15,186 | 15,186 | 72.8 | 72.8 | 0.0 |
| 10th Street W/Tierra Subida Ave | W Avenue N to W Avenue O          | 19,402 | 22,897 | 73.9 | 74.6 | 0.7 |
| 10th Street W/Tierra Subida Ave | W Avenue O to SR 14               | 17,627 | 17,627 | 73.5 | 73.5 | 0.0 |
| 10th Street W/Tierra Subida Ave | SR 14 to Rancho Vista Blvd        | 35,324 | 35,324 | 76.7 | 76.7 | 0.0 |
| 10th Street W/Tierra Subida Ave | Rancho Vista Blvd to Technology D | 31,954 | 37,661 | 76.3 | 77.0 | 0.7 |
| 10th Street W/Tierra Subida Ave | Technology Dr to W Palmdale Blvd  | 39,039 | 47,477 | 77.0 | 77.9 | 0.8 |
| 10th Street W/Tierra Subida Ave | W Palmdale Blvd to Rayburn Rd     | 16,569 | 18,512 | 73.2 | 73.7 | 0.5 |
| Sierra Hwy                      | Columbia Way to E Avenue N        | 25,408 | 37,932 | 76.9 | 78.7 | 1.7 |
| Sierra Hwy                      | E Avenue N to E Avenue O          | 27,037 | 36,183 | 77.2 | 78.5 | 1.3 |
| Sierra Hwy                      | E Avenue O to E Avenue P          | 32,133 | 53,660 | 77.9 | 80.2 | 2.2 |
| Sierra Hwy                      | E Avenue P to E Avenue Q          | 14,366 | 14,366 | 74.4 | 74.4 | 0.0 |
| Sierra Hwy                      | E Avenue Q to Palmdale Blvd       | 15,176 | 15,253 | 74.7 | 74.7 | 0.0 |
| Sierra Hwy                      | Palmdale Blvd to E Avenue R       | 9,993  | 9,993  | 72.9 | 72.9 | 0.0 |
| Sierra Hwy                      | E Avenue R to E Avenue S          | 7,289  | 7,289  | 71.5 | 71.5 | 0.0 |
| Sierra Hwy                      | E Avenue S to Pearblossom Hwy     | 8,070  | 8,070  | 71.9 | 71.9 | 0.0 |
| 10th Street E                   | E Avenue P to E Avenue Q          | 2,357  | 2,357  | 63.1 | 63.1 | 0.0 |
| 10th Street E                   | E Avenue Q to E Palmdale Blvd     | 5,732  | 5,732  | 67.1 | 67.1 | 0.0 |
| 10th Street E                   | E. Palmdale Blvd to Avenue R      | 5,756  | 5,756  | 67.0 | 67.0 | 0.0 |
| 10th Street E                   | Avenue R to Avenue S1             | 3,898  | 3,898  | 65.3 | 65.3 | 0.0 |
| 20th Street E                   | E Avenue P to E Avenue Q          | 4,738  | 6,362  | 63.3 | 64.6 | 1.3 |
| 20th Street E                   | E Avenue Q to Palmdale Blvd       | 7,760  | 9,746  | 65.4 | 66.4 | 1.0 |
| 20th Street E                   | Palmdale Blvd to E Avenue R       | 13,063 | 13,063 | 67.8 | 67.8 | 0.0 |
| 20th Street E                   | E Avenue R to E Avenue S          | 12,215 | 12,938 | 67.5 | 67.8 | 0.2 |
| 25th Street E                   | E Avenue P to E Avenue Q          | 4,102  | 8,624  | 67.4 | 70.6 | 3.2 |
| 25th Street E                   | E Avenue Q to Palmdale Blvd       | 6,948  | 8,947  | 69.7 | 70.8 | 1.1 |
| 25th Street E                   | Palmdale Blvd to E Avenue R       | 12,851 | 13,007 | 72.5 | 72.5 | 0.1 |

|   |                                  |        |        |      |      |     |
|---|----------------------------------|--------|--------|------|------|-----|
| 25th Street E                           | E Avenue R to E Avenue S         | 16,629 | 16,629 | 73.6 | 73.6 | 0.0 |
| 25th Street E                           | E Avenue S to Pearblossom Hwy    | 14,269 | 14,269 | 72.9 | 72.9 | 0.0 |
| 30th Street E                           | E Avenue P to E Avenue Q         | 5,987  | 7,961  | 66.3 | 67.6 | 1.2 |
| 30th Street E                           | E Avenue Q to Palmdale Blvd      | 6,083  | 7,821  | 66.4 | 67.5 | 1.1 |
| 30th Street E                           | Palmdale Blvd to E Avenue R      | 7,721  | 8,354  | 67.6 | 67.9 | 0.3 |
| 30th Street E                           | E Avenue R to E Avenue S         | 8,871  | 8,871  | 68.2 | 68.2 | 0.0 |
| 40th Street E                           | E Avenue P to E Avenue Q         | 5,610  | 11,891 | 67.3 | 70.5 | 3.3 |
| 40th Street E                           | E Avenue Q to E Palmdale Blvd    | 7,185  | 7,185  | 68.3 | 68.3 | 0.0 |
| 40th Street E                           | E Palmdale Blvd to E Avenue R    | 9,892  | 14,092 | 69.8 | 71.3 | 1.5 |
| 40th Street E                           | E Avenue R to E Avenue S         | 9,037  | 12,432 | 69.4 | 70.8 | 1.4 |
| 40th Street E                           | E Avenue S to Sierra Hwy         | 10,505 | 10,612 | 70.0 | 70.0 | 0.0 |
| 47th Street E/50th Street E/Ft Tejon Rd | E Avenue M to E Avenue N         | 18,016 | 22,987 | 73.6 | 74.7 | 1.1 |
| 47th Street E/50th Street E/Ft Tejon Rd | E Avenue P to Palmdale Blvd      | 12,874 | 16,180 | 72.2 | 73.2 | 1.0 |
| 47th Street E/50th Street E/Ft Tejon Rd | Palmdale Blvd to E Avenue R      | 25,702 | 26,588 | 75.3 | 75.4 | 0.1 |
| 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R to E Avenue R-8       | 26,908 | 26,908 | 75.5 | 75.5 | 0.0 |
| 47th Street E/50th Street E/Ft Tejon Rd | E Avenue R-8 to E Avenue S       | 19,854 | 19,854 | 74.2 | 74.2 | 0.0 |
| 47th Street E/50th Street E/Ft Tejon Rd | E Avenue S to Essex Dr           | 24,514 | 28,816 | 75.2 | 75.9 | 0.7 |
| 47th Street E/50th Street E/Ft Tejon Rd | Essex Dr to Pearblossom Hwy      | 24,367 | 24,367 | 75.1 | 75.1 | 0.0 |
| 47th Street E/50th Street E/Ft Tejon Rd | Pearblossom Hwy to E Avenue T-8  | 21,099 | 30,811 | 74.4 | 76.1 | 1.6 |
| Technology Dr                           | 10th Street W to Trade Center Dr | 7,205  | 7,277  | 68.5 | 68.5 | 0.0 |
| Technology Dr                           | 5th Street W to Division St      | 7,574  | 7,574  | 68.7 | 68.7 | 0.0 |
| Technology Dr                           | Division St to Sierra Hwy        | 7,805  | 7,805  | 68.8 | 68.8 | 0.0 |



# Appendix F

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Mitigation Monitoring and Reporting Program

# Mitigation Monitoring and Reporting Program

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CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program is intended to track and ensure compliance with adopted mitigation measures during the project implementation phase. For each mitigation measure recommended in the Final Environmental Impact Report (Final EIR), specifications are made herein that identify the action required, the monitoring that must occur, and the agency or department responsible for oversight.

| Mitigation Measure/<br>Condition of Approval  | Action Required   | Monitoring Timing          | Monitoring Frequency | Responsible Agency                          | Compliance Verification |      |          |
|---|---|----------------------------|----------------------|---|-------------------------|------|----------|
|   |   |                            |                      |   | Initial                 | Date | Comments |
| <b>Air Quality</b>  |   |                            |                      |   |                         |      |          |
| <b>MM-AQ-1- Architectural Coating</b>   |   |                            |                      |   |                         |      |          |
| <p>If a development project facilitated by the Plan would generate construction and operational emissions and such emissions may result in adverse impacts to local air quality, then these recommendations shall be implemented and incorporated in the project.</p> <p>The City shall require that the following measures be implemented for all projects where unmitigated ROG impacts exceed regulatory thresholds. Implementation of these measures shall ensure that ROG emissions are reduced to below 137 lbs/day during construction activities.</p> <ul style="list-style-type: none"> <li>▪ Project contractors shall use architectural coating materials that are zero-emission or have a low-ROG content (below 10 grams per liter). Where such ROG coatings are not available or feasible, the coating with the lowest ROG rating available shall be used. These measures shall be noted on all construction plans, and the City shall perform periodic site inspections during construction to verify compliance; and/or,</li> <li>▪ All architectural coating phases shall be extended such that ROG emissions are reduced to below 137 lbs/day.</li> </ul> | <p>Confirm that the actions required under this mitigation measure are implemented for individual projects under the Plan where unmitigated ROG impacts exceed regulatory thresholds.</p> | <p>During construction</p> | <p>Periodically</p>  | <p>City of Palmdale Planning Department</p> |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required   | Monitoring Timing  | Monitoring Frequency   | Responsible Agency                   | Compliance Verification |      |          |
|---|---|--|--|--------------------------------------|-------------------------|------|----------|
|   |   |  |  |                                      | Initial                 | Date | Comments |
| <b>MM-AQ-2: Operational Emissions Reductions</b>  |   |  |  |                                      |                         |      |          |
| <p>If a development project facilitated by the Plan would generate construction and operational emissions and such emissions may result in adverse impacts to local air quality, then these recommendations shall be implemented and incorporated in the project. The City shall require that some or all of the following measures be implemented for individual projects under the Plan where unmitigated criteria pollutant impacts exceed regulatory thresholds. Applicable measures shall be incorporated such that emissions are fully reduced to below regulatory thresholds or the greatest extent feasible. The reduction measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>▪ Architectural coating materials that are zero-emission or have a low-ROG content (below 10 grams per liter). Where such ROG coatings are not available, the coating with the lowest ROG rating available shall be used</li> <li>▪ Require new development to exceed the applicable Title 24 energy-efficiency requirements</li> <li>▪ Projects shall incorporate outdoor electrical outlets such that 10 percent of outdoor landscaping equipment can be electrically powered</li> <li>▪ All dock doors shall be equipped with electric plugs for electric TRUs</li> <li>▪ Installation of electric vehicle charging stations at three percent beyond those required by State and local codes</li> <li>▪ Provide infrastructure to allow for future electric vehicle charging stations for a minimum of 10 percent of the parking spaces beyond those already required to</li> </ul> | <ol style="list-style-type: none"> <li>1. Confirm that some or all of the actions required under this mitigation measures are included in the design of, and made conditions approval of, individual projects under the Plan where unmitigated criteria pollutant impacts exceed regulatory thresholds.</li> <li>2. Confirm that the actions required as conditions of approval for individual projects under the Plan are carried out during construction and incorporated into the design and operation of those projects where unmitigated criteria pollutant impacts exceed regulatory thresholds.</li> </ol> | <ol style="list-style-type: none"> <li>1. Prior to project approval.</li> <li>2. During construction and at least once before operation (for post-construction actions)</li> </ol> | <ol style="list-style-type: none"> <li>1. Once</li> <li>2. Periodically</li> </ol> | City of Palmdale Planning Department |                         |      |          |

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| Mitigation Measure/<br>Condition of Approval | Action Required   | Monitoring Timing | Monitoring Frequency | Responsible Agency | Compliance Verification |      |          |
|--|---|-------------------|----------------------|--------------------|-------------------------|------|----------|
|  |   |                   |                      |                    | Initial                 | Date | Comments |
|  | accommodate electric vehicle charging stations <ul style="list-style-type: none"> <li>▪ Require new development to implement circulation design elements in parking lots for non-residential uses to reduce vehicle queuing and improve the pedestrian environment</li> <li>▪ Utilization of electric vehicles and/or alternatively fueled vehicles in company fleet</li> <li>▪ Provision of dedicated parking for carpools, vanpool, and clean air vehicles</li> <li>▪ Provision of vanpool and/or shuttle service for employees</li> <li>▪ Implementation of reduced parking minimum requirements</li> <li>▪ Implementation of maximum parking limits</li> <li>▪ Provision of bicycle parking facilities beyond those required by State and local codes</li> <li>▪ Provision of a bicycle-share program</li> <li>▪ Expansion of bicycle routes/lanes along the project site frontage</li> <li>▪ Provision of new or improved transit amenities (e.g., covered turnouts, bicycle racks, covered benches, signage, lighting) if the project site is located along an existing transit route</li> <li>▪ Expansion of sidewalk infrastructure along the project site frontage</li> <li>▪ Provision of safe, pedestrian-friendly, and interconnected sidewalks and streetscapes</li> <li>▪ Provision of employee lockers and showers</li> <li>▪ Provision of on-site services that reduce the need for off-site travel (e.g., childcare facilities, automatic teller machines, postal machines, food services)</li> <li>▪ Provision of alternative work schedule options, such as telework or reduced</li> </ul> |                   |                      |                    |                         |      |          |

| Mitigation Measure/<br>Condition of Approval   | Action Required  | Monitoring Timing                       | Monitoring Frequency | Responsible Agency                          | Compliance Verification |      |          |
|--|--|---|----------------------|---|-------------------------|------|----------|
|  |  |   |                      |   | Initial                 | Date | Comments |
| <p>working days per week (e.g., 9/80 or 10/40 schedules), for employees</p> <ul style="list-style-type: none"> <li>Implementation of transportation demand management programs to educate and incentivize residents and/or employees to use transit, smart commute, and alternative transportation options</li> <li>As applicable all industrial uses shall be required to enroll in U.S. EPA’s SmartWay program and shall use carriers that are SmartWay carriers</li> </ul>  |  |   |                      |   |                         |      |          |
| <b>Biological Resources</b>  |  |   |                      |   |                         |      |          |
| <b>MM-BIO-1 Pre-Construction Nesting Bird Surveys</b>  |  |   |                      |   |                         |      |          |
| <p>If a development project carried out under the Plan would have the potential to adversely affect special-status species, including nesting birds, or their habitat, then these recommendations shall be implemented and incorporated in the project.</p> <p>To avoid disturbance of nesting and special-status birds, including raptorial species protected by the MBTA and CFGC, activities related to construction projects carried out under the Plan, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season, February 15 through September 15 (as early as January 1 for some raptors). If construction must begin during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot inside the area of proposed development, including a 300-foot buffer (500-foot for raptors), and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a</p> | <p>Confirm that the actions required under this mitigation measures are implemented for individual projects under the Plan where special-status species have the potential to be adversely affected.</p> | <p>Prior to construction activities</p> | <p>Periodically</p>  | <p>City of Palmdale Planning Department</p> |                         |      |          |

| Mitigation Measure/<br>Condition of Approval   | Action Required   | Monitoring Timing  | Monitoring Frequency   | Responsible Agency                   | Compliance Verification |      |          |
|--|---|--|--|--------------------------------------|-------------------------|------|----------|
|  |   |  |  |                                      | Initial                 | Date | Comments |
| <p>biologist familiar with the identification of avian species known to occur in southern California desert communities.</p> <p>If nests are found, an avoidance buffer (dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist</p> |   |  |  |                                      |                         |      |          |
| <b>Cultural Resources</b>  |   |  |  |                                      |                         |      |          |
| <b>MM-CUL-1 Historical Resources</b>   |   |  |  |                                      |                         |      |          |
| <p>A historical resources evaluation shall be prepared for all discretionary projects carried out under the Plan involving a property which includes buildings, structures, objects, sites, landscape/site plans, or other features that are 45 years of age or older. The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualifications Standards (PQS) in architectural history or history. The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify any potential historical resources within the proposed development site. All structures 45 years of</p>  | <ol style="list-style-type: none"> <li>1. Confirm that a historic resources evaluation has been prepared by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualifications Standards (PQS) in architectural history or history, consistent with the requirements of this mitigation measure.</li> <li>2. If historical resources are identified within the project area of a proposed development, confirm that efforts are made, to the extent feasible, to ensure that impacts are mitigated, consistent with the requirements of this mitigation measure.</li> </ol> | <ol style="list-style-type: none"> <li>1. Prior to construction and grading activities</li> <li>2. Prior to construction and grading activities</li> </ol> | <ol style="list-style-type: none"> <li>1. Once</li> <li>2. Once</li> </ol> | City of Palmdale Planning Department |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required | Monitoring Timing  | Monitoring Frequency                            | Responsible Agency | Compliance Verification |      |          |
|---|-----------------|--|---|--------------------|-------------------------|------|----------|
|   |                 |  |   |                    | Initial                 | Date | Comments |
| <p>age or older shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the City for review and concurrence. If the property is already listed in the NRHP, CRHR, or as a Landmark in Palmdale, the historical resources evaluation described above shall not be required.</p> <p>If historical resources are identified within the project area of a proposed development, efforts shall be made to the extent feasible to ensure that impacts are mitigated. Application of mitigation shall generally be overseen by a qualified architectural historian or historic architect meeting the PQS, unless unnecessary in the circumstances (e.g., preservation in place). In conjunction with any development application that may affect the historical resource, the historical resources evaluation report shall also identify and specify the treatment of character-defining features and construction activities.</p> <p>Efforts shall be made to the greatest extent possible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards). In accordance with CEQA, a project that has been determined to conform with the Standards generally would not cause a significant adverse direct or indirect impact to historical resources (14 CCR § 15126.4(b)(1)). Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. In conjunction with any development application that may affect the historical</p> | 3.              | If historical resources are identified within the project area of a proposed development, confirm that efforts have been made to the greatest extent possible to ensure that the relocation, rehabilitation, or alteration of the resource is consistent with the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards) and the requirements of this mitigation measure. | 3. Prior to construction and grading activities | 3. Once            |                         |      |          |
|   | 4.              | If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, confirm that appropriate site-specific mitigation measures are established and undertaken, consistent with the requirements of this mitigation measure.   | 4. Prior to construction and grading activities | 4. Once            |                         |      |          |



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| Mitigation Measure/<br>Condition of Approval   | Action Required   | Monitoring Timing   | Monitoring Frequency | Responsible Agency                          | Compliance Verification |      |          |
|--|---|---|----------------------|---|-------------------------|------|----------|
|  |   |   |                      |   | Initial                 | Date | Comments |
| <p>resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review and concurrence. As applicable, the report shall demonstrate how the project complies with the Standards and be submitted to the City for review and approval prior to the issuance of any permits.</p> <p>If significant historical resources are identified on a development site and compliance with the Standards and or avoidance is not possible, appropriate site-specific mitigation measures shall be established and undertaken. Mitigation measures may include documentation of the historical resource in the form of a Historic American Building Survey (HABS)-Like report. The report shall comply with the Secretary of the Interior’s Standards for Architectural and Engineering Documentation and shall generally follow the HABS Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the PQS and be submitted to the City prior to issuance of any permits for demolition or alteration of the historical resource.</p> |   |   |                      |   |                         |      |          |
| <b>MM-CUL-2 Phase 1 Archaeological Resources Study</b>   |   |   |                      |   |                         |      |          |
| <p>For any project carried out under the General Plan Update, the City and/or project applicant shall investigate the potential to disturb archaeological resources. If the project will involve any ground disturbance (unless the project site is within soils that can be reliably demonstrated as being non-native or artificial fill) a Phase I cultural resources study shall be performed by a qualified professional meeting the Secretary of the Interior’s (SOI’s) Professional Qualification</p>  | <p>1. If any project carried out under the General Plan Update will involve any ground disturbance (unless the project site is within soils that can be reliably demonstrated as being non-native or artificial fill) confirm that a Phase I cultural resources study consistent with the requirements of this mitigation measure has been performed by</p> | <p>1. Prior to issuance of construction and grading permits</p> | <p>1. Once</p>       | <p>City of Palmdale Planning Department</p> |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required  | Monitoring Timing  | Monitoring Frequency | Responsible Agency                   | Compliance Verification |      |          |
|---|--|--|----------------------|--------------------------------------|-------------------------|------|----------|
|   |  |  |                      |                                      | Initial                 | Date | Comments |
| Standards (PQS) for archaeology (National Park Service 1983). If a project would solely involve the refurbishment of an existing building and no ground disturbance would occur, this measure would not be required. The Phase I cultural resources study shall include a pedestrian survey of the project site and sufficient background research and field sampling to determine whether archaeological resources may be present. Archival research shall include a records search of the South Central Coastal Information Center no more than two years old and a Sacred Lands File search with the NAHC. The Phase I technical report documenting the study shall include recommendations that must be implemented prior to and/or during construction to avoid or reduce impacts on archaeological resources. The report shall be submitted to the City of Palmdale for review and approval prior to the issuance of any grading or construction permits. Recommendations in the Phase I technical report shall be made Conditions of Approval and shall be implemented throughout all ground disturbance activities. | a qualified professional meeting the Secretary of the Interior’s (SOI’s) Professional Qualification Standards (PQS) for archaeology (National Park Service 1983), and review and approve this study. |  |                      |                                      |                         |      |          |
|   | 2. Make all recommendations of the Phase I technical report Conditions of Approval of the project.   | 2. Prior to issuance of construction and grading permits | 2. Once              |                                      |                         |      |          |
|   | 3. Confirm that all Conditions of Approval are carried out throughout all ground disturbance activities.   | 3. During ground disturbance activities                  | 3. Periodically      |                                      |                         |      |          |
| <b>MM-CUL-3 Extended Phase 1 Testing</b>  |  |  |                      |                                      |                         |      |          |
| For any projects proposed within 100 feet of a known archaeological site and/or in areas identified as sensitive by a Phase I study [Mitigation Measure CUL-2], the project applicant shall retain a qualified archaeologist to conduct an Extended Phase I (XPI) study to determine the presence/absence and extent of archaeological resources on the project site. XPI testing should comprise a series of shovel test pits and/or hand augured units and/or mechanical trenching to establish the boundaries of archaeological site(s) on the   | 1. Confirm that an XPI study has been done by a qualified archaeologist retained by the project applicant if required under this mitigation measure, and review and approve the XPI.                 | 1. Prior to issuance of construction and grading permits | 1. Once              | City of Palmdale Planning Department |                         |      |          |
|   | 2. Confirm that all recommendations of the XPI are carried out throughout all ground disturbance activities.   | 2. During ground disturbance activities                  | 2. Periodically      |                                      |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required  | Monitoring Timing   | Monitoring Frequency | Responsible Agency                          | Compliance Verification |      |          |
|---|--|---|----------------------|---|-------------------------|------|----------|
|   |  |   |                      |   | Initial                 | Date | Comments |
| <p>project site. If the boundaries of the archaeological site are already well understood from previous archaeological work, an XPI will not be required. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s).</p> <p>All archaeological excavation shall be conducted by a qualified archaeologist(s) under the direction of a principal investigator meeting the SOI's PQS for archaeology (National Park Service 1983). If an XPI report is prepared, it shall be submitted to the City of Palmdale for review and approval prior to the issuance of any grading or construction permits.</p> <p>Recommendations contained therein shall be implemented for all ground disturbance activities.</p> |  |   |                      |   |                         |      |          |
| <b>MM-CUL-4 Archaeological Site Avoidance</b>   |  |   |                      |   |                         |      |          |
| <p>Any identified archaeological sites (determined after implementing mitigation measures CUL-2 and/or CUL-3) shall be avoided by project-related construction activities, where feasible. A barrier (temporary fencing) and flagging shall be placed between the work location and any resources within 60 feet of a work location to minimize the potential for inadvertent impacts.</p>  | <p>Confirm that the avoidance measures described in this mitigation measure are being carried out during project-related construction activities.</p>  | <p>During construction and grading activities</p>               | <p>Periodically</p>  | <p>City of Palmdale Planning Department</p> |                         |      |          |
| <b>MM-CUL-5 Phase II Site Evaluation</b>  |  |   |                      |   |                         |      |          |
| <p>If the results of any Phase I and/or XPI (mitigation measures CUL-2 and/or CUL-3) indicate the presence of archaeological resources that cannot be avoided by the project (Mitigation Measure CUL-4) and that have not been adequately evaluated for the NRHP or CRHR listing at the project site, the qualified archaeologist shall conduct a Phase II investigation to determine if intact deposits remain and if they may be eligible for the CRHR or qualify as unique archaeological resources. If the archaeological resource(s) of concern are</p>  | <p>1. If the results of any Phase I and/or XPI (mitigation measures CUL-2 and/or CUL-3) indicate the presence of archaeological resources that cannot be avoided by the project (Mitigation Measure CUL-4) and that have not been adequately evaluated for the NRHP or CRHR listing at the project site, confirm that a Phase II cultural resources study consistent with the requirements of this mitigation measure has been performed by a qualified professional meeting the Secretary of the Interior's (SOI's)</p> | <p>1. Prior to issuance of construction and grading permits</p> | <p>1. Once</p>       | <p>City of Palmdale Planning Department</p> |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required   | Monitoring Timing  | Monitoring Frequency                  | Responsible Agency | Compliance Verification |      |          |
|---|---|--|---------------------------------------|--------------------|-------------------------|------|----------|
|   |   |  |                                       |                    | Initial                 | Date | Comments |
| <p>Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s).</p> <p>A Phase II evaluation shall include any necessary archival research to identify significant historical associations and mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit. The sample excavation will characterize the nature of the sites, define the artifact and feature contents, determine horizontal and vertical boundaries, and retrieve representative samples of artifacts and other remains.</p> <p>If the archeologist and, if applicable, a Native American monitor (see Mitigation Measure TCR-2) or other interested tribal representative determine it is appropriate, cultural materials collected from the site shall be processed and analyzed in a laboratory according to standard archaeological procedures. The age of the materials shall be determined using radiocarbon dating and/or other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards. The significance of the sites shall be evaluated according to the criteria of the CRHR. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation publication "Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition)." The report shall be submitted to the City of Palmdale for review and approval prior to the issuance of any grading or construction permits. Recommendations in the Phase II report shall be implemented for all ground disturbance activities</p> | <p>Professional Qualification Standards (PQS) for archaeology (National Park Service 1983), and review and approve this study.</p> <p>2. Make all recommendations of the Phase II technical report Conditions of Approval of the project.</p> <p>3. Confirm that all Conditions of Approval are carried out throughout all ground disturbance activities.</p> | <p>2. Prior to issuance of construction and grading permits</p> <p>3. During ground disturbance activities</p> | <p>2. Once</p> <p>3. Periodically</p> |                    |                         |      |          |

City of Palmdale  
2045 General Plan Update

| Mitigation Measure/<br>Condition of Approval   | Action Required | Monitoring Timing  | Monitoring Frequency | Responsible Agency                                    | Compliance Verification |              |                                      |
|--|-----------------|--|----------------------|---|-------------------------|--------------|--------------------------------------|
|  |                 |  |                      |   | Initial                 | Date         | Comments                             |
| <b>MM-CUL-6 Phase III Data Recovery</b>  |                 |  |                      |   |                         |              |                                      |
| <p>Should the results of the Phase II site evaluation (Mitigation Measure CUL-5) yield resources that meet CRHR significance standards and if the resource cannot be avoided by project construction in accordance with CUL-4, the project applicant shall ensure that all feasible recommendations for mitigation of archaeological impacts are incorporated into the final design and approved by the City of Palmdale prior to construction. Any necessary Phase III data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the SOI PQS for archaeology according to a research design reviewed and approved by the City of Palmdale prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the California Office of Historic Preservation Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s). If applicable, a Native American monitor shall be present.</p> <p>As applicable, the final Phase III Data Recovery reports shall be submitted to the City of Palmdale prior to issuance of any grading or construction permit. Recommendations contained therein shall be implemented throughout all ground disturbance activities.</p> | 1.              | Confirm that any reports found to be necessary under the requirements of this mitigation measure have been submitted to, and reviewed and approved by, the City of Palmdale prior to issuance of any grading or construction permit. | 1.                   | Prior to issuance of construction and grading permits | 1.                      | Once         | City of Palmdale Planning Department |
|  | 2.              | Confirm that all feasible recommendations of the reports required under this mitigation measure have been incorporated into the final design of the project and approved by the City of Palmdale                                     | 2.                   | Prior to issuance of construction and grading permits | 2.                      | Once         |                                      |
|  | 3.              | Confirm that all feasible recommendations of the reports required under this mitigation measure are carried out as described in this mitigation measure.   | 3.                   | During construction                                   | 3.                      | Periodically |                                      |

| Mitigation Measure/<br>Condition of Approval   | Action Required   | Monitoring Timing  | Monitoring Frequency                            | Responsible Agency                   | Compliance Verification |      |          |
|--|---|--|---|--------------------------------------|-------------------------|------|----------|
|  |   |  |   |                                      | Initial                 | Date | Comments |
| <b>MM-CUL-7 Cultural Resources Monitoring</b>  |   |  |   |                                      |                         |      |          |
| If recommended by Phase I, XPI, Phase II, or Phase III studies [mitigation measures CUL-2, CUL-3, CUL-5, and/or CUL-6], the project applicant shall retain a qualified archaeologist to monitor project-related, ground-disturbing activities. If archaeological resources are encountered during ground-disturbing activities, mitigation measures CUL-4 through CUL-6 shall be implemented, as appropriate.  | Confirm that the appropriate mitigation measures have been implemented during ground-disturbing activities.   | During construction and grading activities               | Periodically throughout construction activities | City of Palmdale Planning Department |                         |      |          |
| <b>MM-CUL-8 Unanticipated Discovery of Archaeological Resource</b>   |   |  |   |                                      |                         |      |          |
| If archaeological resources are encountered during ground-disturbing activities, work within 60 feet shall be halted and the project archaeologist meeting the SOI's Professional Qualification Standards for archaeology (National Park Service 1983) shall immediately evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work may be warranted, such as data recovery excavation, to mitigate any significant impacts to historical resources. Any reports required to document and/or evaluate unanticipated discoveries shall be submitted to the City of Palmdale for review and approval. Recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities. | 1. Confirm that any reports required to document and/or evaluate unanticipated discoveries have been submitted to the City of Palmdale for review and approval. | 1. Prior to issuance of construction and grading permits | 1. Once   | City of Palmdale Planning Department |                         |      |          |
|  | 2. Confirm that recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities.                               | 2. During construction and grading activities            | 2. Periodically                                 |                                      |                         |      |          |

| Mitigation Measure/<br>Condition of Approval   | Action Required   | Monitoring Timing   | Monitoring Frequency   | Responsible Agency                   | Compliance Verification |      |          |
|--|---|---|--|--------------------------------------|-------------------------|------|----------|
|  |   |   |  |                                      | Initial                 | Date | Comments |
| <b>Geology and Soils</b>   |   |   |  |                                      |                         |      |          |
| <b>MM-GEO-1 Unanticipated Discovery of Paleontological Resources</b>   |   |   |  |                                      |                         |      |          |
| If paleontological resources are encountered during ground-disturbing activities, work within 60 feet shall be halted and the project paleontologist shall immediately evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and paleontological testing. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work may be warranted, such as data recovery excavation, to mitigate any significant impacts to historical resources. Any reports required to document and/or evaluate unanticipated discoveries shall be submitted to the City of Palmdale for review and approval. Recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities. | <ol style="list-style-type: none"> <li>1. Confirm that any reports required to document and/or evaluate unanticipated discoveries have been submitted to the City of Palmdale for review and approval.</li> <li>2. Confirm that recommendations contained therein are implemented throughout the remainder of ground disturbance activities.</li> </ol> | <ol style="list-style-type: none"> <li>1. Prior to issuance of construction and grading permits</li> <li>2. During construction and grading activities</li> </ol> | <ol style="list-style-type: none"> <li>1. Once</li> <li>2. Periodically</li> </ol> | City of Palmdale Planning Department |                         |      |          |
| <b>Noise</b>   |   |   |  |                                      |                         |      |          |
| <b>MM-NOI-1 Construction Vibration Control Measures</b>  |   |   |  |                                      |                         |      |          |
| The following measures to minimize exposure to construction vibration shall be included as standard conditions of approval, as applicable, for construction projects carried out under the Plan within 50 feet of fragile buildings as defined in this mitigation measure. <ol style="list-style-type: none"> <li>1. Avoid the use of vibratory rollers within 50 feet of fragile buildings, which are buildings that are susceptible to damage from vibration as determined by the Palmdale Planning Department.</li> <li>2. Schedule construction activities with the highest potential to produce vibration to hours with the least potential to affect nearby institutional, educational, and office</li> </ol>  | Confirm that the appropriate mitigation measures have been implemented.   | Throughout construction and grading activities  | Periodically   | City of Palmdale Planning Department |                         |      |          |

| Mitigation Measure/<br>Condition of Approval  | Action Required | Monitoring Timing | Monitoring Frequency | Responsible Agency | Compliance Verification |      |          |
|---|-----------------|-------------------|----------------------|--------------------|-------------------------|------|----------|
|   |                 |                   |                      |                    | Initial                 | Date | Comments |
| <p>uses that the Federal Transit Administration identifies as sensitive to daytime vibration (FTA 2006).</p> <p>3. Notify neighbors of scheduled construction activities that would generate vibration.</p> |                 |                   |                      |                    |                         |      |          |

**Tribal Cultural Resources**

**MM-TCR-1 Native American Monitoring**

|   |  |   |             |   |  |  |  |
|---|--|---|-------------|---|--|--|--|
| <p>Prior to the issuance of a grading permit for a project under the Plan, the City of Palmdale (City) shall ensure that the project applicant seeks the services of a tribal monitor(s) approved by the relevant tribes to provide Native American monitoring during ground-disturbing activities. This provision shall be included on the proposed project contractor’s plans and specifications. Ground-disturbing activities are defined by the relevant tribes as activities that may include but are not limited to pavement removal, pot-holing or using an auger, grubbing, tree removals, borings, grading, excavation, drilling, and/or trenching within the project area. The project site shall be made accessible to the monitor(s), provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance.</p> <p>If evidence of tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find to recover and/or determine the appropriate plan of recovery for the resource in consultation with a qualified archaeologist. The recovery process shall not unreasonably delay</p> | <p>Confirm that a tribal monitor has been approved by the relevant tribes to provide Native American monitoring during ground-disturbing activities, consistent with the requirements of this mitigation measure</p> | <p>Prior to issuance of a grading permit for a project under the Plan</p> | <p>Once</p> | <p>City of Palmdale Planning Department</p> |  |  |  |
|---|--|---|-------------|---|--|--|--|



| Mitigation Measure/<br>Condition of Approval  | Action Required   | Monitoring Timing   | Monitoring Frequency   | Responsible Agency                      | Compliance Verification |      |          |
|---|---|---|--|---|-------------------------|------|----------|
|   |   |   |  |   | Initial                 | Date | Comments |
| <p>the construction process and must be carried out consistent with CEQA and local regulations. Construction activity shall not be contingent on the presence or availability of a monitor, and construction may proceed regardless of whether or not a monitor is present on site. The monitor shall complete daily monitoring logs that will provide descriptions of the day’s activities and general observations and whether the Native American monitor believes they observed a TCR and what action they took. The on-site monitoring shall end when the project site grading and excavation activities are completed or prior to the completion if the monitor has indicated that the site has a low potential for tribal cultural resources.</p>  |   |   |  |   |                         |      |          |
| <b>MM-TCR-2 Unanticipated Discovery of Tribal Cultural Resources</b>  |   |   |  |   |                         |      |          |
| <p>Upon discovery of any tribal cultural resources, the Native American monitor has the ability to halt construction activities in the immediate vicinity (within 50 feet) of the find until the find can be assessed. All tribal cultural resources unearthed during project construction activities shall be evaluated by the Native American monitor approved by the relevant tribes and a qualified archaeologist. Construction work shall be permitted to continue on other parts of the project site while evaluation and, if necessary, additional investigations and/or preservation measures take place (CEQA Guidelines Section 15064.5(f)). If the resources are Native American in origin, the relevant tribes shall coordinate with the landowner regarding treatment and curation of these resources. If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique</p> | <ol style="list-style-type: none"> <li>1. Upon the discovery of any tribal cultural resources, confirm construction has been halted per the Native American monitor’s assessment.</li> <li>2. Confirm that the avoidance measures described in this mitigation measure have been implemented</li> </ol> | <ol style="list-style-type: none"> <li>1. Upon the discovery of any tribal cultural resources</li> <li>2. Throughout construction and grading activities after the discovery of any tribal cultural resource</li> </ol> | <ol style="list-style-type: none"> <li>1. Once for each occurrence</li> <li>2. Periodically</li> </ol> | City of Palmdale<br>Planning Department |                         |      |          |

| Mitigation Measure/<br>Condition of Approval   | Action Required | Monitoring Timing | Monitoring Frequency | Responsible Agency | Compliance Verification |      |          |
|--|-----------------|-------------------|----------------------|--------------------|-------------------------|------|----------|
|  |                 |                   |                      |                    | Initial                 | Date | Comments |
| archaeological resource,” time allotment and funding sufficient to allow for implementation of avoidance measures shall be made available through coordination between the relevant tribes and the project applicant. The treatment plan established for the resources shall be in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5(f) for historical resources and Public Resources Code (PRC) Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. |                 |                   |                      |                    |                         |      |          |

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